

Erwin DEHOUCK

Liste de publications et de communications

Mise à jour : 26/07/2023

Publications dans des revues à comité de lecture

Total : 56

- Premier auteur (7) -

[7] **Dehouck, E.**, Cousin, A., Mangold, N., Frydenvang, J., Gasnault, O., Forni, O., Rapin, W., Gasda, P., Caravaca, G., David, G., Bedford, C. C., Lasue, J., Meslin, P.-Y., Rammelkamp, K., Desjardins, M., Le Mouélic, S., Thorpe, M. T., Fox, V. K., Bennett, K. A., Bryk, A. B., Lanza, N., Maurice, S., Wiens, R.C. (2022), Bedrock geochemistry and alteration history of the clay-bearing Glen Torridon region of Gale crater, Mars, *Journal of Geophysical Research: Planets*, DOI: [10.1029/2021JE007103](https://doi.org/10.1029/2021JE007103)

↪ Article mis en avant par un communiqué de presse UCBL-ENSL-CNRS (7 mars 2022)

[6] **Dehouck, E.**, McLennan, S. M., Sklute, E. C., Dyar, M. D. (2017), Stability and fate of ferrihydrite during episodes of water/rock interactions on early Mars: An experimental approach, *Journal of Geophysical Research-Planets*, 122, 358–382, DOI: [10.1002/2016JE005222](https://doi.org/10.1002/2016JE005222)

[5] **Dehouck, E.**, Gaudin, A., Chevrier, V., Mangold, N. (2016), Mineralogical record of redox conditions on early Mars, *Icarus*, 271, 67–75, DOI: [10.1016/j.icarus.2016.01.030](https://doi.org/10.1016/j.icarus.2016.01.030)

[4] **Dehouck, E.**, McLennan, S. M., Meslin, P.-Y., Cousin, A. (2014), Constraints on abundance, composition and nature of X-ray amorphous components of soils and rocks at Gale crater, Mars, *Journal of Geophysical Research-Planets*, 119, 2640–2657, DOI: [10.1002/2014JE004716](https://doi.org/10.1002/2014JE004716)

[3] **Dehouck, E.**, Gaudin, A., Mangold, N., Lajaunie, L., Dauzères, A., Grauby, O., Le Menn, E. (2014), Weathering of olivine under CO₂ atmosphere: A martian perspective, *Geochimica et Cosmochimica Acta*, 135, 170–189, DOI: [10.1016/j.gca.2014.03.032](https://doi.org/10.1016/j.gca.2014.03.032)

[2] **Dehouck, E.**, Chevrier, V., Gaudin, A., Mangold, N., Mathé, P.-E., Rochette, P. (2012), Evaluating the role of sulfide-weathering in the formation of sulfates or carbonates on Mars, *Geochimica et Cosmochimica Acta*, 90, 47–63, DOI: [10.1016/j.gca.2012.04.057](https://doi.org/10.1016/j.gca.2012.04.057)

↪ Article mis en avant dans la section "Editor's choice" de *Science* (13 juillet 2012)

[1] **Dehouck, E.**, Mangold, N., Le Mouélic, S., Ansan, V., Poulet, F. (2010), Ismenius Cavus, Mars: A deep paleolake with phyllosilicate deposits, *Planetary and Space Science*, 58 (6), 941-946, DOI: [10.1016/j.pss.2010.02.005](https://doi.org/10.1016/j.pss.2010.02.005)

- Co-auteur (49) -

[49] Quantin-Nataf, C., Alwmark, S., Calef, F. J., Lasue, J., Kinch, K., Stack, K. M., Sun, V., Williams, N.R., **Dehouck, E.**, Mandon, L., Mangold, N., Beyssac, O., Clavé, É., Walter, S. H. G., Simon, J. I., Annex, A. M., Horgan, B., Rice, J. W., Shuster, D., Cohen, B., Kah, L., Sholes, S., Weiss, B. P. (2023), The complex exhumation history of the Jezero crater floor unit and its implication for Mars Sample Return, *Journal of Geophysical Research: Planets*, DOI: [10.1029/2022JE007628](https://doi.org/10.1029/2022JE007628)

[48] Beyssac, O., Forni, O., Cousin, A., Udry, A., Kah, L. C., Mandon, L., Clavé, E., Liu, Y.,

Poulet F., Quantin Nataf, C., Gasnault, O., Johnson, J., Benzerara, K., Beck, P., **Dehouck, E.**, Mangold, N., Alvarez Llamas, C., Anderson, R., Arana, G., Barnes, R., Bernard, S., Bosak, T., Brown, A. J., Castro, K., Chide, B., Clegg, S., Cloutis, E., Fouchet, T., Gabriel, T., Gupta S., Lacombe, G., Lasue J., Le Mouélic, S., Lopez-Reyes, G., Madariaga, J. M., McCubbin, F., McLennan, S., Manrique, J. A., Meslin, P.-Y., Montmessin, F., Núñez, J., Ollila, A. M., Ostwald, A., Pilleri, P., Pinet, P., Royer, C., Sharma, S. K., Schröder, S., Simon, J. I., Toplis M. J., Veneranda, M., Willis, P. A., Maurice, S., Wiens, R.C., and the SuperCam team (2023), Petrological traverse of the olivine cumulate Séítah formation at Jezero crater, Mars: A perspective from SuperCam onboard Perseverance, *Journal of Geophysical Research: Planets*, [DOI: 10.1029/2022JE007638](https://doi.org/10.1029/2022JE007638)

[47] Goetz, W., **Dehouck, E.**, Gasda, P. J., Johnson, J. R., Meslin, P.-Y., Lanza, N. L., Wiens, R. C., Rapin, W., Frydenvang, J., Payré, V., Gasnault, O. (2023), Detection of copper by the ChemCam instrument along Curiosity's traverse in Gale crater, Mars: Elevated abundances in Glen Torridon, *Journal of Geophysical Research: Planets*, [DOI: 10.1029/2021JE007101](https://doi.org/10.1029/2021JE007101)

[46] Royer, C., Fouchet, T., Mandon, L., Montmessin, F., Poulet, F., Forni, O., Johnson, J. R., Leggett, C., Le Mouélic, S., Gasnault, O., Quantin-Nataf, C., Beck, P., **Dehouck, E.**, Clavé, E., Ollila, A. M., Pilorget, C., Bernardi, P., Reess, J.-M., Pilleri, P., Brown, A., Newell, R. T., Cloutis, E., Maurice, S., Wiens, R. C., and the SuperCam team (2022), Reflectance of Jezero crater floor: 1. Data processing and calibration of the Infrared Spectrometer (IRS) on SuperCam, *Journal of Geophysical Research: Planets*, [DOI: 10.1029/2022JE007481](https://doi.org/10.1029/2022JE007481)

[45] Clavé, É., Benzerara, K., Meslin, P.-Y., Forni, O., Royer, C., Mandon, L., Beck, P., Quantin-Nataf, C., Beyssac, O., Cousin, A., Bousquet, B., Wiens, R. C., Maurice, S., **Dehouck, E.**, Schröder, S., Gasnault, O., Mangold, N., Dromart, G., Bosak, T., Bernard, S., Udry, A., Anderson, R. B., Arana, G., Brown, A. J., Castro, K., Clegg, S. M., Cloutis, E., Fairen, A. G., Flannery, D. T., Gasda, P. J., Johnson, J. R., Lasue, J., Lopez-Reyes, G., Madariaga, J. M., Manrique, J. A., Le Mouélic, S., Núñez, J. I., Ollila, A. M., Pilleri, P., Pilorget, C., Pinet, P., Poulet, F., Veneranda, M., Wolf, U., and the SuperCam team (2022), Carbonate detection with SuperCam in igneous rocks on the floor of Jezero Crater, Mars, *Journal of Geophysical Research: Planets*, [DOI: 10.1029/2022JE007463](https://doi.org/10.1029/2022JE007463)

[44] Mandon, L., Quantin-Nataf, C., Royer, C., Beck, P., Fouchet, T., Johnson, J., **Dehouck, E.**, Le Mouélic, S., Poulet, F., Montmessin, F., Pilorget, C., Gasnault, O., Forni, O., Mayhew, L. E., Beyssac, O., Bertand, T., Clavé, É., Pinet, P., Brown, A. J., Leggett, C., Tarnas, J., Cloutis, E. A., Poggiali, G., Fornaro, T., Maurice, S., Wiens, R. C., and the SuperCam team (2022), Reflectance of Jezero crater floor: 2. Mineralogical interpretation, *Journal of Geophysical Research: Planets*, [DOI: 10.1029/2022JE007450](https://doi.org/10.1029/2022JE007450)

[43] Sutter, B., McAdam, A. C., Wong, G. M., Clark, J. V., Archer, P. D., Franz, H. B., Gasda, P. J., Ming, D. W., Yen, A., Lewis, J. M. T., Schwenzer, S. P., Turner, S. M. R., Rampe, E. B., Eigenbrode, J. L., Stern, J. C., Thompson, L. M., **Dehouck, E.**, Bedford, C., Banham, S., Bryk, A. B., O'Connell-Cooper, C., House, C. S., Millan, M., Freissinet, C., Navarro-Gonzalez, R., Mahaffy, P. R., Malespin, C. A. (2022), Constraining alteration processes along the Siccar Point group unconformity, Gale crater, Mars: Results from the Sample Analysis at Mars instrument, *Journal of Geophysical Research: Planets*, [DOI: 10.1029/2022JE007387](https://doi.org/10.1029/2022JE007387)

[42] David, G., **Dehouck, E.**, Meslin, P.-Y., Rapin, W., Cousin, A., Forni, O., Gasnault, O., Lasue, J., Mangold, N., Beck, P., Maurice, S., Wiens, R. C., Berger, G., Fabre, S., Pinet, P., Clark, B. C., Smith, R. J., Lanza, N. L. (2022), Evidence for amorphous sulfates as the main carrier of soil hydration in Gale crater, Mars, *Geophysical Research Letters*, 49, [DOI: 10.1029/2022GL098755](https://doi.org/10.1029/2022GL098755)

[41] Udry, A., Ostwald, A., Sautter, V., Cousin, A., Beyssac, O., Forni, O., Dromart, G., Benzerara, K., Nachon, M., Horgan, B., Mandon, L., Clavé, E., **Dehouck, E.**, Gibbons, E., Alwmark, S., Ravanis, E., Wiens, R. C., Legett, C., Anderson, R., Pilleri, P., Mangold, N., Schmidt, M., Liu, Y., Núñez, J. I., Castro, K., Madariaga, J. M., Kizovski, T., Beck, P., Bernard, S., Bosak, T., Brown, A., Clegg, S., Cloutis, E., Cohen, B., Connell, S., Crumpler, L., Debaille, V., Flannery, D., Fouchet, T., Gabriel, T. S. J., Gasnault, O., Herd, C. D. K., Johnson, J., Manrique, J. A., Maurice, S., McCubbin, F. M., McLennan, S., Ollila, A., Pinet, P., Quantin-Nataf, C., Royer, C., Sharma, S., Simon, J. I., Steele, A., Tosca, N., Treiman, A., and the SuperCam team (2022), A Mars 2020 Perseverance SuperCam perspective on the igneous nature of the Máaz formation at Jezero crater and link with Séítah, Mars, *Journal of Geophysical Research: Planets*, DOI: [10.1029/2022JE007440](https://doi.org/10.1029/2022JE007440)

[40] Thorpe, M. T., Bristow, T. F., Rampe, E. B., Tosca, N. J., Grotzinger, J. P., Bennett, K. A., Achilles, C. N., Blake, D. F., Chipera, S. J., Downs, G., Downs, R. T., Morrison, S. M., Tu, V., Castle, N., Craig, P., Des Marais, D. J., Hazen, R. M., Ming, D. W., Morris, R. V., Treiman, A. H., Vaniman, D. T., Yen, A. S., Vasavada, A. R., **Dehouck, E.**, Bridges, J. C., Berger, J., McAdam, A., Peretyazhko, T., Siebach, K. L., Bryk, A. B., Fox, V. K., Fedo, C. M. (2022), Mars Science Laboratory CheMin data from the Glen Torridon region and the significance of lake-groundwater interactions in interpreting mineralogy and sedimentary history, *Journal of Geophysical Research: Planets*, DOI: [10.1029/2021JE007099](https://doi.org/10.1029/2021JE007099)

[39] Farley, K., Stack, K. M., Shuster, D. L., Horgan, B. H. N., Hurowitz, J. A., Tarnas, J. D., Simon, J. I., Sun, V. Z., Scheller, E. L., Moore, K. R., McLennan, S. M., Vasconcelos, P. M., Wiens, R. C., Treiman, A. H., Mayhew, L. E., Beyssac, O., Kizovski, T. V., Tosca, N. J., Williford, K. H., Crumpler, L. S., Beegle, L. W., Bell III, J. F., Ehlmann, B. L., Liu, Y., Maki, J. N., Schmidt, M. E., Allwood, A. C., Amundsen, H. E. F., Bhartia, R., Bosak, T., Brown, A. J., Clark, B. C., Cousin, A., Forni, O., Gabriel, T. S. J., Goreva, Y., Gupta, S., Hamran, S.-E., Herd, C. D. K., Hickman-Lewis, K., Johnson, J. R., Kah, L. C., Kelemen, P. B., Kinch, K. B., Mandon, L., Mangold, N., Quantin-Nataf, C., Rice, M. S., Russell, P. S., Sharma, S., Siljeström, S., Steele, A., Sullivan, R., Wadhwa, M., Weiss, B. P., Williams, A. J., Wogsland, B. V., Willis, P. A., Acosta-Maeda, T. A., Beck, P., Benzerara, K., Bernard, S., Burton, A. S., Cardarelli, E. L., Chide, B., Clavé, E., Cloutis, E. A., Cohen, B. A., Czaja, A. D., Debaille, V., **Dehouck, E.**, Fairén, A. G., Flannery, D. T., Fleron, S. Z., Fouchet, T., Frydenvang, J., Garczynski, B. J., Gibbons, E. F., Hausrath, E. M., Hayes, A. G., Henneke, J., Jørgensen, J. L., Kelly, E. M., Lasue, J., Le Mouélic, S., Madariaga, J. M., Maurice, S., Merusi, M., Meslin, P.-Y., Milkovich, S. M., Million, C. C., Moeller, R. C., Núñez, J. I., Ollila, A. M., Paar, G., Paige, D. A., Pedersen, D. A. K., Pilleri, P., Pilorget, C., Pinet, P. C., Rice Jr., J. W., Royer, C., Sautter, V., Schulte, M., Sephton, M. A., Sharma, S. K., Sholes, S. F., Spanovich, N., St. Clair, M., Tate, C. D., Uckert, K., VanBommel, S. J., Yanchilina, A. G., Zorzano, M.-P. (2022), Aqueously altered igneous rocks on the floor of Jezero crater, Mars, *Science*, 377, eabo2196, DOI: [10.1126/science.abo2196](https://doi.org/10.1126/science.abo2196)

↪ Article mis en avant par des communiqués de presse NASA et CNRS (25 août 2022)

[38] Wiens, R. C., Udry, A., Beyssac, O., Quantin-Nataf, C., Mangold, N., Cousin, A., Mandon, L., Bosak, T., Forni, O., McLennan, S. M., Sautter, V., Brown, A., Benzerara, K., Johnson, J. R., Mayhew, L., Maurice, S., Anderson, R. B., Clegg, S. M., Crumpler, L., Gabriel, T. S. J., Gasda, P., Hall, J., Horgan, B. H. N., Kah, L., Legett IV, C., Madariaga, J. M., Meslin, P.-Y., Ollila, A. M., Poulet, F., Royer, C., Sharma, S. K., Siljeström, S., Simon, J. I., Acosta-Maeda, T. E., Alvarez-Llamas, C., Michael Angel, S., Arana, G., Beck, P., Bernard, S., Bertrand, T., Bousquet, B., Castro, K., Chide, B., Clavé, E., Cloutis, E., Connell, S., **Dehouck, E.**, Dromart, G., Fischer, W., Fouchet, T., Francis, R., Frydenvang, J., Gasnault, O., Gibbons, E., Gupta, S., Hausrath, E. M., Jacob, X., Kalucha, H., Kelly, E., Knutsen, E., Lanza, N., Laserna, J., Lasue, J., Le Mouélic, S., Leveille, R., Lopez Reyes, G., Lorenz, R., Manrique, J. A., Martinez-Frias, J., McConnochie, T., Melikechi, N., Mimoun, D., Montmessin, F., Moros, J., Murdoch, N., Pilleri, P., Pilorget, C., Pinet, P., Rapin, W., Rull, F.,

Schröder, S., Shuster, D. L., Smith, R. J., Stott, A. E., Tarnas, J., Turenne, N., Veneranda, M., Vogt, D. S., Weiss, B. P., Willis, P., Stack, K. M., Williford, K. H., Farley, K. A., and the SuperCam team (2022), Compositionally and density stratified igneous terrain in Jezero crater, Mars, *Science Advances*, 8, eabo3399, DOI: [10.1126/sciadv.abo3399](https://doi.org/10.1126/sciadv.abo3399)
↪ Article mis en avant par des communiqués de presse NASA et CNRS (25 août 2022)

[37] Bennett, K. A., Fox, V. K., Bryk, A., Dietrich, W., Fedo, C., Edgar, L., Thorpe, M. T., Williams, A. J., Wong, G. M., **Dehouck, E.**, McAdam, A., Sutter, B., Millan, M., Banham, S. G., Bedford, C. C., Bristow, T., Fraeman, A., Vasavada, A. R., Grotzinger, J., Thompson, L., O'Connell-Cooper, C., Gasda, P., Rudolph, A., Sullivan, R., Arvidson, R., Cousin, A., Horgan, B., Stack, K. M., Treiman, A., Eigenbrode, J., Caravaca, G. (2022), An overview of the Curiosity rover's campaign in Glen Torridon, Gale crater, Mars, *Journal of Geophysical Research: Planets*, DOI: [10.1029/2022JE007185](https://doi.org/10.1029/2022JE007185)

[36] Caravaca, G., Mangold, N., **Dehouck, E.**, Schieber, J., Zaugg, L., Bryk, A., Fedo, C., Le Mouélic, S., Le Deit, L., Banham, S., Gupta, S., Cousin, A., Rapin, W., Gasnault, O., Rivera-Hernández, F., Wiens, R., Lanza, N. (2022), From lake to river: Documenting an environmental transition across the Jura/Knockfarril Hill members boundary in the Glen Torridon region of Gale crater (Mars), *Journal of Geophysical Research: Planets*, DOI: [10.1029/2021JE007093](https://doi.org/10.1029/2021JE007093)

[35] Smith, R. J., McLennan, S. M., Sutter, B., Rampe, E. B., **Dehouck, E.**, Siebach, K. L., Horgan, B. H. N., Sun, V., McAdam, A., Mangold, N., Vaniman, D., Salvatore, M., Thorpe, M. T., Achilles, C. N. (2022), X-ray amorphous sulfur-bearing phases in sedimentary rocks of Gale crater, Mars, *Journal of Geophysical Research: Planets*, 127, DOI: [10.1029/2021JE007128](https://doi.org/10.1029/2021JE007128)

[34] Gasda, P. J., Comellas, J., Essunfeld, A., Das., D., Bryk, A. B., **Dehouck, E.**, Schwenzer, S. P., Crossey, L., Herkenhoff, K., Johnson, J. R., Newsom, H., Lanza, N. L., Rapin, W., Goetz, W., Meslin, P.-Y., Bridges, J. C., Anderson, R., David, G., Turner, S. M. R., Thorpe, M. T., Kah, L., Frydenvang, J., Kronyak, R., Caravaca, G., Ollila, A., Le Mouélic, S., Nellesen, M., Hoffman, M., Fey, D., Cousin, A., Wiens, R. C., Clegg, S. M., Maurice, S., Gasnault, O., Delapp, D., Reyes-Newell, A. (2022), Overview of the morphology and chemistry of diagenetic features in the clay-rich Glen Torridon unit of Gale crater, Mars, *Journal of Geophysical Research: Planets*, DOI: [10.1029/2021JE007097](https://doi.org/10.1029/2021JE007097)
↪ Article mis en avant par un communiqué de presse LANL (21 avril 2022)

[33] Bedford, C. C., Banham, S. G., Bridges, J. C., Forni, O., Cousin, A., Bowden, D., Turner, S. M. R., Wiens, R. C., Gasda, P. J., Frydenvang, J., Gasnault, O., Rammelkamp, K., Rivera-Hernandez, F., Rampe, E. B., Smith, R., Achilles, C., **Dehouck, E.**, Bryk, A. B., Schwenzer, S. P., Newsom, H. (2022), An insight into ancient aeolian processes and post-Noachian aqueous alteration in Gale crater, Mars, using ChemCam geochemical data from the Greenheugh capping unit, *Journal of Geophysical Research: Planets*, DOI: [10.1029/2021JE007100](https://doi.org/10.1029/2021JE007100)

[32] Anderson, R. B., Forni, O., Cousin, A., Wiens, R. C., Clegg, S. M., Frydenvang, J., Gabriel, T. S. J., Ollila, A., Schröder, S., Beyssac, O., Gibbons, E., Vogt, D. S., Clavé, E., Manrique, J.-A., Legett IV, C., Pilleri, P., Newell, R. T., Sarrao, J., Maurice, S., Arana, G., Benzerara, K., Bernardi, P., Bernard, S., Bousquet, B., Brown, A. J., Alvarez-Llamas, C., Chide, B., Cloutis, E., Comellas, J., Connell, S., **Dehouck, E.**, Delapp, D. M., Essunfeld, A., Fabre, C., Fouchet, T., Garcia-Florentino, C., García-Gómez, L., Gasda, P., Gasnault, O., Hausrath, E. M., Lanza, N. L., Laserna, J., Lasue, J., Lopez, G., Madariaga, J. M., Mandon, L., Mangold, N., Meslin P.-Y., Nelson, A. E., Newsom, H., Reyes-Newell, A. L., Robinson, S., Rull, F., Sharma, S., Simon, J.I., Sobron, P., Fernandez, I.T., Udry, A., Venhaus, D., McLennan, S.M., Morris, R.V., Ehlmann, B. (2022), Post-landing major element quantification using SuperCam laser induced breakdown spectroscopy, *Spectrochimica Acta Part B*, 188, 106347, DOI: [10.1016/j.sab.2021.106347](https://doi.org/10.1016/j.sab.2021.106347)

[31] Mandon, L., Beck, P., Quantin-Nataf, C., **Dehouck, E.**, Thollot, P., Loizeau, D., Volat, M. (2022), ROMA: A database of rock reflectance spectra for Martian in situ exploration, *Earth and Space Science*, 9, [DOI: 10.1029/2021EA001871](https://doi.org/10.1029/2021EA001871)

[30] Rammelkamp, K., Gasnault, O., Forni, O., Bedford, C. C., **Dehouck, E.**, Cousin, A., Lasue, J., David, G., Gabriel, T. S. J., Maurice, S., Wiens, R. C. (2021), Clustering supported classification of ChemCam data from Gale crater, Mars, *Earth and Space Science*, 8, [DOI: 10.1029/2021EA001903](https://doi.org/10.1029/2021EA001903)

↪ Article mis en avant dans le magazine *Eos* ([12 janvier 2022](#))

[29] Wiens, R. C., Blazon-Brown, A. J., Melikechi, N., Frydenvang, J., **Dehouck, E.**, Clegg, S. M., Delapp, D., Anderson, R. B., Cousin, A., Maurice, S. (2021), Improving ChemCam LIBS long-distance elemental compositions using empirical abundance trends, *Spectrochimica Acta Part B*, 182, 106247, [DOI: 10.1016/j.sab.2021.106247](https://doi.org/10.1016/j.sab.2021.106247)

[28] Mandon, L., Beck, P., Quantin-Nataf, C., **Dehouck, E.**, Pommerol, A., Yoldi, Z., Cerubini, R., Pan, L., Martinot, M., Sautter, V. (2021), Martian meteorites reflectance and implications for rover missions, *Icarus*, 366, 114517, [DOI: 10.1016/j.icarus.2021.114517](https://doi.org/10.1016/j.icarus.2021.114517)

[27] David, G., Meslin, P.-Y., **Dehouck, E.**, Gasnault, O., Cousin, A., Forni, O., Berger, G., Lasue, J., Pinet, P., Wiens, R. C., Maurice, S., Fronton, J.-F., Rapin, W. (2021), Laser-Induced Breakdown Spectroscopy (LIBS) characterization of granular soils: Implications for ChemCam analyses at Gale crater, Mars, *Icarus*, 365, 114481, [DOI: 10.1016/j.icarus.2021.114481](https://doi.org/10.1016/j.icarus.2021.114481)

[26] Maurice, S., Wiens, R. C., Bernardi P., Caïs, P., Robinson, S., Nelson, T., Gasnault, O., Reess, J.-M., Deleuze, M., Rull, F., Manrique, J.-A., Abbaki, S., Anderson, R. B., André, Y., Angel, S. M., Arana, G., Battault, T., Beck, P., Benzerara, K., Bernard, S., Berthias, J.-P., Beyssac, O., Bonafous, M., Bousquet, B., Boutillier, M., Cadu, A., Castro, K., Chapron, F., Chide, B., Clark, K., Clavé, E., Clegg, S., Cloutis, E., Collin, C., Cordoba, E. C., Cousin, A., Dameury, J.-C., D'Anna, W., Daydou, Y., Debus, A., Deflores, L., **Dehouck, E.**, Delapp, D., De Los Santos, G., Donny, C., Doressoundiram, A., Dromart, G., Dubois, B., Dufour, A., Dupieux, M., Egan, M., Ervin, J., Fabre, C., Fau, A., Fischer, W., Forni, O., Fouchet, T., Frydenvang, J., Gauffre, S., Gauthier, M., Gharakanian, V., Gilard, O., Gontijo, I., Gonzalez, R., Granena, D., Grotzinger, J., Hassen-Khodja, R., Heim, M., Hello, Y., Hervet, G., Humeau, O., Jacob, X., Jacquiod, S., Johnson, J. R., Kouach, D., Lacombe, G., Lanza, N., Lapauw, L., Laserna, J., Lasue, J., Le Deit, L., Le Mouélic, S., Le Comte, E., Lee, Q.-M., Leggett IV, C., Leveille, R., Lewin, E., Leyrat, C., Lopez-Reyes, G., Lorenz, R., Lucero, B., Madariaga, J. M., Madsen, S., Madsen, M., Mangold, N., Manni, F., Mariscal, J.-F., Martinez-Frias, J., Mathieu, K., Mathon, R., McCabe, K. P., McConnochie, T., McLennan, S. M., Mekki, J., Melikechi, N., Meslin, P.-Y., Micheau, Y., Michel, Y., Michel, J. M., Mimoun, D., Misra, A., Montagnac, G., Montaron, C., Montmessin, F., Moros, J., Mousset, V., Morizet, Y., Murdoch, N., Newell, R. T., Newsom, H., Nguyen Tuong, N., Ollila, A. M., Orttner, G., Oudda, L., Pares, L., Parisot, J., Parot, Y., Pérez, R., Pheav, D., Picot, L., Pilleri, P., Pilorget, C., Pinet, P., Pont, G., Poulet, F., Quantin-Nataf, C., Quertier, B., Rambaud, D., Rapin, W., Romano, P., Roucayrol, L., Royer, C., Ruellan, M., Sandoval, B. F., Sautter, V., Schoppers, M. J., Schröder, S., Seran, H.-C., Sharma, S. K., Sobron, P., Sodki, M., Sournac, A., Sridhar, V., Standarovsky, D., Storms, S., Striebig, N., Tatat, M., Toplis, M., Torre-Fdez, I., Toulemont, N., Velasco, C., Veneranda, M., Venhaus, D., Virmontois, C., Viso, M., Willis, P., Wong, K. W. (2021), The SuperCam Instrument suite on the Mars 2020 Rover: Science objectives and Mast-Unit Description, *Space Science Reviews*, 217 (47), [DOI: 10.1007/s11214-021-00807-w](https://doi.org/10.1007/s11214-021-00807-w)

[25] Bennett, K. A., Rivera-Hernandez, F., Tinker, C., Horgan, B., Fey, D. M., Edwards, C., Edgar, L. A., Kronyak, R., Edgett, K. S., Fraeman, A. A., Kah, L. C., Henderson, M., Stein, N., **Dehouck, E.**, Williams, A. J. (2021), Diagenesis revealed by fine-scale features at Vera Rubin ridge, Gale crater, Mars, *Journal of Geophysical Research: Planets*, 126, [DOI:](#)

[24] Mandon, L., Parkes Bowen, A., Quantin-Nataf, C., Bridges, J. C., Carter, J., Pan, L., Beck, P., **Dehouck, E.**, Volat, M., Thomas, N., Cremonese, G., Tornabene, L. L., Thollot, P. (2021), Morphological and spectral diversity of the clay-bearing unit at the ExoMars landing site Oxia Planum, *Astrobiology*, 21 (4), [DOI: 10.1089/ast.2020.2292](https://doi.org/10.1089/ast.2020.2292)

[23] Lagain, A. Bouley, S., Baratoux, D., Marmo, C., Costard, F., Delaa, O., Pio Rossi, A., Minin, M., Benedix, G. K., Ciocco, M., Bedos, B., Guimpier, A., **Dehouck, E.**, Loizeau, D., Bouquety, A., Zhao, J., Vialatte, A., Cormau, M., Le Conte des Floris, E., Schmidt, F., Thollot, P., Champion, J., Martinot, M., Gargani, J., Beck, P., Boisson, J., Paulien, N., Séjourné, A., Pasquon, K., Christoff, N., Belgacem, I., Landais, F., Rousseau, B., Dupeyrat, L., Franco, M., Andrieu, F., Cecconi, B., Erard, S., Jabaud, B., Malarewicz, V., Beggiano, G., Janez, G., Elbaz, L., Ourliac, C., Catheline, M., Fries, M., Karamoko, A., Rodier, J., Sarian, R., Gillet, A., Girard, S., Pottier, M., Strauss, S., Chanon, C., Lavaud, P., Boutaric, A., Savourat, M., Garret, E., Leroy, E., Geffray, M.-C., Parquet, L., Delagoutte, M.-A., Gamblin, O. (2021), Mars Crater Database: A participative project for the classification of the morphological characteristics of large Martian craters, [DOI: 10.1130/2021.2550\(29\)](https://doi.org/10.1130/2021.2550(29))
in Reimold, W. U., Koeberl, C. (éd.), Large meteorite impacts and planetary evolution VI, *GSA Special Papers*, 550, [DOI: 10.1130/SPE550](https://doi.org/10.1130/SPE550)

[22] Smith, R. J., McLennan, S. M., Achilles, C. N., **Dehouck, E.**, Horgan, B. H. N., Mangold, N., Rampe, E. B., Salvatore, M., Siebach, K. L., Sun, V. (2021), X-ray amorphous components in sedimentary rocks of Gale Crater, Mars: Evidence for ancient formation and long-lived aqueous activity, *Journal of Geophysical Research: Planets*, 126, [DOI: 10.1029/2020je006782](https://doi.org/10.1029/2020je006782)

[21] Quantin-Nataf, C., Carter, J., Mandon, L., Thollot, P., Balme, M., Volat, M., Pan, L., Loizeau, D., Millot, C., Breton, S., **Dehouck, E.**, Fawdon, P., Gupta, S., Davis, J., Grindrod, P. M., Pacifici, A., Bultel, B., Allemand, P., Ody, A., Lozach, L., Broyer, J. (2021), Oxia Planum: The landing site for the ExoMars “Rosalind Franklin” rover mission: Geological context and prelanding interpretation, *Astrobiology*, 21 (3), [DOI: 10.1089/ast.2019.2191](https://doi.org/10.1089/ast.2019.2191)
↪ Article parmi « les plus lus publiés en 2021 » du journal *Astrobiology* (e-mail du 13 janvier 2022)

[20] L’Haridon, J., Mangold, N., Fraeman, A. A., Johnson, J. R., Cousin, A., Rapin, W., David, G., **Dehouck, E.**, Sun, V., Frydenvang, J., Gasnault, O., Gasda, P., Lanza, N., Forni, O., Meslin, P.-Y., Schwenzer, S., Bridges, J., Horgan, B., House, C. H., Salvatore, M., Maurice, S., Wiens, R. C. (2020), Iron mobility during diagenesis at Vera Rubin ridge, Gale crater, Mars, *Journal of Geophysical Research: Planets*, 125, [DOI: 10.1029/2019JE006299](https://doi.org/10.1029/2019JE006299)
↪ Article parmi « les plus cités en 2020-2021 » du journal *JGR-Planets* (e-mail du 31 mars 2022)

[19] Freissinet, C., Knudson, C. A., Graham, H. V., Lewis, J. M. T., Lasue, J., McAdam, A. C., Teinturier, S., Szopa, C., **Dehouck, E.**, Morris, R. V., Malespin, C. A., Mahaffy, P. R. (2020), Benzoic acid as the preferred precursor for the chlorobenzene detected on Mars: Insights from the unique Cumberland analog investigation, *The Planetary Science Journal*, 1, 41, [DOI: 10.3847/PSJ/aba690](https://doi.org/10.3847/PSJ/aba690)

[18] David, G., Cousin, A., Forni, O., Meslin, P.-Y., **Dehouck, E.**, Mangold, N., L’Haridon, J., Rapin, W., Gasnault, O., Johnson, J. R., Ollila, A. M., Newell, A. R., Salvatore, M., Gabriel, T. S. J., Wiens, R. C., Maurice, S. (2020), Analyses of high-iron sedimentary bedrock and diagenetic features observed with ChemCam at Vera Rubin ridge, Gale crater, Mars: Calibration and characterization, *Journal of Geophysical Research: Planets*, 125, [DOI: 10.1029/2019JE006314](https://doi.org/10.1029/2019JE006314)

[17] Mandon, L., Quantin, C., Thollot, P., Mangold, N., Lozac’h, L., Dromart, G., Beck, P., **Dehouck, E.**, Breton, S., Millot, C., Volat, M. (2020), Refining the age, emplacement and alteration scenarios of the olivine-rich unit in the Nili Fossae region, Mars, *Icarus*, 336, 113436, [DOI: 10.1016/j.icarus.2019.113436](https://doi.org/10.1016/j.icarus.2019.113436)

↪ Article mis en avant par un communiqué de presse Esa (1^{er} juillet 2020)

[16] Thorpe, M. T., Hurowitz, J. A., **Dehouck, E.** (2019), Sediment geochemistry and mineralogy from a glacial terrain river system in southwest Iceland, *Geochimica et Cosmochimica Acta*, 263, 140–166, DOI: [10.1016/j.gca.2019.08.003](https://doi.org/10.1016/j.gca.2019.08.003)

[15] Mangold, N., **Dehouck, E.**, Fedo, C., Forni, O., Achilles, C., Bristow, T., Downs, R. T., Frydenvang, J., Gasnault, O., L'Haridon, J., Le Deit, L., Maurice, S., McLennan, S. M., Meslin, P.-Y., Morrison, S., Newson, H. E., Rampe, E., Rapin, W., Rivera-Hernandez, F., Salvatore, M., Wiens, R. C. (2019), Chemical alteration of fine-grained sedimentary rocks at Gale crater, *Icarus*, 321, 619–631, DOI: [10.1016/j.icarus.2018.11.004](https://doi.org/10.1016/j.icarus.2018.11.004)

[14] Salvatore, M., Truitt, K., Roszell, K., Lanza, N., Rampe, E., Mangold, N., **Dehouck, E.**, Wiens, R., Clegg, S. (2019), Investigating the role of anhydrous oxidative weathering on sedimentary rocks in the Transantarctic Mountains and implications for the modern weathering of sedimentary lithologies on Mars, *Icarus*, 319, 669–684, DOI: [10.1016/j.icarus.2018.10.007](https://doi.org/10.1016/j.icarus.2018.10.007)

[13] Lasue, J., Cousin, A., Meslin, P.-Y., Mangold, N., Wiens, R. C., Berger, G., **Dehouck, E.**, Forni, O., Goetz, W., Gasnault, O., Rapin, W., Schroeder, S., Ollila, A., Johnson, J., Le Mouélic, S., Maurice, S., Anderson, R., Blaney, D., Clark, B., Clegg, S. M., D'Uston, C., Fabre, C., Lanza, N., Madsen, M. B., Martin-Torres, J., Melikechi, N., Newsom, H., Sautter, V., Zorzano, M. P. (2018), Martian eolian dust probed by ChemCam, *Geophysical Research Letters*, 45, DOI: [10.1029/2018GL079210](https://doi.org/10.1029/2018GL079210)

[12] Smith, R. J., Rampe, E., Horgan, B., **Dehouck, E.** (2018), Deriving amorphous phase abundance and composition from bulk chemistry and XRD mineralogy on Earth and Mars, *Journal of Geophysical Research: Planets*, 123, 2485–2505, DOI: [10.1029/2018JE005612](https://doi.org/10.1029/2018JE005612)

[11] Rapin, W., Chauviré, B., Gabriel, T. S. J., McAdam, A. C., Ehlmann, B. L., Hardgrove, C., Meslin, P.-Y., Rondeau, B., **Dehouck, E.**, Franz, H. B., Mangold, N., Chipera, S. J., Wiens, R. C., Frydenvang, J., Schröder, S. (2018), In situ analysis of opal in Gale crater, Mars, *Journal of Geophysical Research: Planets*, 123, DOI: [10.1029/2017JE005483](https://doi.org/10.1029/2017JE005483)

[10] Stein, N., Grotzinger, J. P., Schieber, J., Mangold, N., Hallet, B., Newsom, H., Stack, K., Berger, J. A., Thompson, L., Siebach, K., Cousin, A., Le Mouélic, S., Minitti, M., Sumner, D. Y., Fedo, C., House, C., Gupta, S., Vasavada, A. R., Gellert, R., Wiens, R. C., Frydenvang, J., Forni, O., Meslin, P.-Y., Payré, V., **Dehouck, E.** (2018), Desiccation cracks provide evidence of lake drying on Mars, Sutton Island member, Murray Formation, Gale Crater, *Geology*, 46 (6), 515–518, DOI: [10.1130/G40005.1](https://doi.org/10.1130/G40005.1)

↪ Article mis en avant sur le site skyandtelescope.com (25 avril 2018)

[9] Gaudin, A., **Dehouck, E.**, Grauby, O., Mangold, N. (2018), Formation of clay minerals on Mars: Insights from long-term experimental weathering of olivine, *Icarus*, 311, 210–223, DOI: [10.1016/j.icarus.2018.01.029](https://doi.org/10.1016/j.icarus.2018.01.029)

[8] L'Haridon, J., Mangold, N., Meslin, P.-Y., Johnson, J., Rapin, W., Forni, O., Cousin, A., Payré, V., **Dehouck, E.**, Nachon, M., Le Deit, L., Gasnault, O., Maurice, S., Wiens, R. C. (2018), Chemical variability in mineralized veins observed by ChemCam on the lower slopes of Mount Sharp in Gale crater, Mars, *Icarus*, 311, 69–86, DOI: [10.1016/j.icarus.2018.01.028](https://doi.org/10.1016/j.icarus.2018.01.028)

[7] Rapin, W., Bousquet, B., Lasue, J., Meslin, P.-Y., Lacour, J.-L., Fabre, C., Wiens, R. C., Frydenvang, J., **Dehouck, E.**, Maurice, S., Gasnault, O., Forni, O., Cousin, A. (2017), Roughness effects on the hydrogen signal in laser-induced breakdown spectroscopy, *Spectrochimica Acta Part B*, 137, 13–22, DOI: [10.1016/j.sab.2017.09.003](https://doi.org/10.1016/j.sab.2017.09.003)

[6] Cousin, A., **Dehouck, E.**, Meslin, P.-Y., Forni, O., Williams, A. J., Stein, N., Gasnault, O., Bridges, N. T., Ehlmann, B. L., Schröder, S., Payré, V., Rapin, W., Pinet, P., Sautter, V., Lanza, N. L., Lasue, J., Maurice, S., Wiens, R. C. (2017), Geochemistry of the Bagnold dune

field as observed by ChemCam and comparison with other aeolian deposits at Gale crater, *Journal of Geophysical Research: Planets*, 122, [DOI: 10.1002/2017JE005261](https://doi.org/10.1002/2017JE005261)

[5] Hurowitz, J. A., Grotzinger, J. P., Fisher, W. W., McLennan, S. M., Milliken, R. E., Stein, N., Vasavada, A. R., Blake, D. F., **Dehouck E.**, Eigenbrode, J. L., Fairen, A. G., Frydenvang, J., Gellert, R., Grant, J. A., Gupta, S., Herkenhoff, K. E., Ming, D. W., Rampe, E. B., Schmidt, M. E., Siebach, K., Stack-Morgan, K., Sumner, D. Y., Wiens, R. C. (2017), Redox stratification of an ancient lake in Gale crater, Mars, *Science*, 356, [DOI: 10.1126/science.aah6849](https://doi.org/10.1126/science.aah6849)

↪ Article mis en avant par un communiqué de presse Nasa (1^{er} juin 2017)

[4] Rapin, W., Meslin, P.-Y., Maurice, S., Wiens, R. C., Laporte, D., Chauviré, B., Gasnault, O., Schröder, S., Beck, P., Bender, S., Beyssac, O., Cousin, A., **Dehouck, E.**, Drouet, C., Forni, O., Nachon, M., Melikechi, N., Rondeau, B., Mangold, N., Thomas, N. (2017), Quantification of water content by laser induced breakdown spectroscopy on Mars, *Spectrochimica Acta Part B*, 130, 82–100, [DOI: 10.1016/j.sab.2017.02.007](https://doi.org/10.1016/j.sab.2017.02.007)

↪ Prix du meilleur article publié en 2017 (*SAB 2017 Award*)

[3] Cino, C. D., **Dehouck. E.**, McLennan, S. M. (2017), Geochemical constraints on the presence of clay minerals in the Burns formation, Meridiani Planum, Mars, *Icarus*, 281, 137–150, [DOI: 10.1016/j.icarus.2016.08.029](https://doi.org/10.1016/j.icarus.2016.08.029)

[2] Mangold, N., Carter, J., Poulet, F., **Dehouck, E.**, Ansan, V., Loizeau, D. (2012), Late Hesperian aqueous alteration at Majuro crater, Mars, *Planetary and Space Science*, 72 (1), 18–30, [DOI: 10.1016/j.pss.2012.03.014](https://doi.org/10.1016/j.pss.2012.03.014)

[1] Gaudin, A., **Dehouck, E.**, Mangold, N. (2011), Evidence for weathering on Early Mars from a comparison with terrestrial weathering profiles, *Icarus*, 216, 257–268,

[DOI: 10.1016/j.icarus.2011.09.004](https://doi.org/10.1016/j.icarus.2011.09.004)

↪ Article mis en avant par le *Planetary Geomorphology Working Group* (janvier 2012)

- 2023 -

[29] **[Oral] Dehouck, E.**, Forni, O., Quantin-Nataf, C., Beck, P., Mangold, N., Royer, C., Clavé, E., Beyssac, O., Johnson, J. R., Mandon, L., Poulet, F., Le Mouélic, S., Caravaca, G., Kalucha, H., Gibbons, E., Dromart, G., Gasda, P., Meslin, P.-Y., Schroeder, S., Udry, A., Anderson, R., Clegg, S., Cousin, A., Gabriel, T., Lasue, J., Fouchet, T., Pilleri, P., Pilorget, C., Hurowitz, J., Núñez, J., Williams, A., Russell, P., Simon, J. I., Maurice, S., Wiens, R. C. (2023), Geochemistry and mineralogy of ancient sedimentary rocks analyzed by the SuperCam instrument in the Jezero delta, Mars, *Goldschmidt Conference*, Lyon, France, #18636

[28] Debaille, V., Forni, O., Anderson, R., Beck, P., Beyssac, O., Clavé, E., Clegg, S., Cousin, A., **Dehouck, E.**, Fouchet, T., Gabriel, T., Johnson, J. R., Le Mouélic, S., Mandon, L., Maurice, S., Meslin, P.-Y., Pilleri, P., Poulet, F., Quantin-Nataf, C., Royer, C., Udry, A., Wiens, R. C. (2023), Investigation of the petrogenetic relationship between the two igneous formations in Jezero crater by using trace element concentrations acquired by the Perseverance SuperCam instrument, *Goldschmidt Conference*, Lyon, France, #19739

[27] Hurowitz, J., Tice, M., M., Allwood, A., Cable, M., Bosak, T., Broz, A., Caravaca, G., Clark, C., B., **Dehouck, E.**, Fairen, G. A., Gomez, F., Grotzinger, P., J., Gupta, S., Johnson, R. J., Kah, C., L., Kalucha, H., Labrie, J., Li, Y., A., Mandon, L., Núñez, J., Pedersen, Klevang, Arge, D., Poulet, F., Randazzo, N., Scheller, L. E., Schmidt, M., Shuster, L., D., Siebach, K., Siljeström, S., Simon, I., J., Tosca, J., N., Treiman, A., VanBommel, J. S., Wade, A., L., Williford, H., K., Yanchilina, A. (2023), Provenance and diagenesis of Martian sedimentary rocks in the Jezero crater delta front from microscale observations by the Mars 2020 PIXL instrument, *Goldschmidt Conference*, Lyon, France, #18487

[26] Mangold, N., Caravaca, G., **Dehouck, E.**, Beyssac, O., Beck, P., Clavé, E., Cousin, A., Dromart, G., Forni, O., Fouchet, T., Gasnault, O., Gupta, S., Le Mouélic, S., Mandon, L., Maurice, S., Meslin, P.-Y., Quantin-Nataf, C., Royer, C., Wiens, R., and the SuperCam team (2023), Observations of the Perseverance rover at the Jezero crater delta front using the SuperCam instrument, *EGU General Assembly*, Vienna, Austria, #4896

[25] Quantin-Nataf, C., Beyssac, O., Udry, A., Mandon, L., Clavé, E., Benzerara, K., **Dehouck, E.**, Poulet, F., Beck, P., Le Mouélic, S., Mangold, N., Cousin, A., Meslin, P. Y., Forni, O., Gasnault, O., Wiens, R., Maurice, S. (2023), Comparison of orbital and SuperCam in situ investigation of the floor units of Jezero crater, *EGU General Assembly*, Vienna, Austria, #14114

[24] Ollila, A., Chide, B., Lanza, N., Garczynski, B., Schmidt, M., Gasda, P., Forni, O., Cousin, A., **Dehouck, E.**, Wiens, R., Maurice, S., Nachon, M., Johnson, J., Clegg, S., and the SuperCam team (2023), Analysis of purple coatings by the SuperCam instrument on the Perseverance rover in Jezero crater, Mars, *EGU General Assembly*, Vienna, Austria, #10794

[23] **[Oral] Dehouck, E.**, Forni, O., Quantin-Nataf, C., Beck, P., Mangold, N., Royer, C., Clavé, E., Beyssac, O., Johnson, J. R., Mandon, L., Poulet, F., Le Mouélic, S., Caravaca, G., Kalucha, H., Gibbons, E., Dromart, G., Gasda, P., Meslin, P.-Y., Schroeder, S., Udry, A., Anderson, R. B., Clegg, S., Cousin, A., Gabriel, T. S., Lasue, J., Fouchet, T., Pilleri, P., Pilorget, C., Hurowitz, J., Núñez, J., Williams, A., Russell, P., Simon, J. I., Maurice, S., Wiens, R. C., and the SuperCam team (2023), Overview of the bedrock geochemistry and mineralogy observed by SuperCam during Perseverance's delta front campaign, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, #2862

[22] Beck, P., Forni, O., **Dehouck, E.**, Beyssac, O., Benzerara, K., Quantin-Nataf, C., Schröder, S., Meslin, P.-Y., Clavé, E., Cousin, A., Pilleri, P., Lasue, J., Rapin, W., Anderson, R. B., Gasnault, O., Gabriel, T. S. J., Brown, A. J., Maurice, S., Wiens, R. C. (2023), Secondary mineralogy of Jezero delta rocks from hydrogen and carbon emission lines in

SuperCam LIBS data, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1241](#)

[21] Beyssac, O., Clavé, E., **Dehouck, E.**, Forni, O., Udry, A., Beck, P., Cousin, A., Mangold, N., Quantin-Nataf, C., Royer, C., Mandon, L., Johnson, J. R., Simon, J. I., Meslin, P.-Y., Fouchet, T., Le Mouélic, S., Pilorget, C., Caravaca, G., Poulet, F., Lasue, J., Pilleri, P., Ollila, A. M., Clegg, S., Núñez, J. I., Maurice, S., Wiens, R. C. (2023), A journey across the transition between the igneous Séítah floor unit and the delta with the Mars2020 SuperCam instrument at Jezero crater, Mars, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1458](#)

[20] Forni, O., Beck, P., Johnson, J. R., **Dehouck, E.**, Quantin-Nataf, C., Beyssac, O., Udry, A., Cousin, A., Anderson, R. B., Mandon, L., Royer, C., Clavé, E., Poulet, F., Le Mouélic, S., Meslin, P.-Y., Pilleri, P., Debaille, V., Maurice, S., Wiens, R. C., Clegg, S. M., Fouchet, T., Brown, A. J. (2023), Combining Supercam LIBS and VISIR: Constraining the mineralogy in Jezero crater, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1244](#)

[19] Rammelkamp, K., Gasnault, O., Bedford, C. C., **Dehouck, E.**, Schröder, S. (2023), The impact of compositional changes on random forest predictions: Application to ChemCam LIBS data from Gale crater, Mars, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2131](#)

[18] Zastrow, A. M., Ollila, A. M., Clegg, S. M., **Dehouck, E.**, Gibbons, E., Johnson, J. R., Wiens, R. C., Quantin-Nataf, C., Brown, A., Lasue, J., Forni, O., Pilleri, P., Legett IV, C., Fouchet, T., Royer, C., Cousin, A., Maurice, S. (2023), Unsupervised classification of Mars 2020 SuperCam VISIR spectra, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2645](#)

[17] Broz, A. P., Horgan, B. H., Kalucha, H., Garczynski, B., Haber, J., **Dehouck, E.**, Hurowitz, J., Johnson, J., Bell, J., and the Mastcam-Z team (2023), Diagenetic alteration of Hogwallow Flats, Jezero crater, Mars, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1845](#)

[16] Gasda, P. J., Crossey, L., Das, D., Schwenzer, S. P., Tutolo, B., Turner, S., **Dehouck, E.** (2023), The nature of diagenetic vein- and nodule-forming brines in Glen Torridon, Gale crater, Mars, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2188](#)

[15] Gasnault, O., Lanza, N., Wiens, R., Maurice, S., Mangold, N., Johnson, J., **Dehouck, E.**, Beck, P., Cousin, A., Pinet, P., Bridges, J., Dromart, G., McConnochie, T., Le Mouélic, S., and the ChemCam team (2023), ChemCam: Zapping Mars for 10 years (and more), *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2076](#)

[14] Mandon, L., Ehlmann, B. L., Wiens, R. C., Horgan, B., Garczynski, B. J., Johnson, J. R., **Dehouck, E.**, Royer, C., Fouchet, T., Núñez, J. I., Bell III, J. F., Brown, A., Maurice, S. (2023), Variable past-redox conditions at Jezero crater, Mars, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1423](#)

[13] Comellas, J. M., Sharma, S. K., Gasda, P. J., Cousin, A., Mayhew, L., Brown, A. J., Acosta-Maeda, T. E., **Dehouck, E.**, Veneranda, M., Connell, S., Cloutis, E., Ollila, A., Lanza, N., Clegg, S., Delapp, D., Maurice, S., Wiens, R. C. (2023), The identification of serpentinization on Mars with Mars2020 SuperCam instrument, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2940](#)

[12] Hurowitz, J. A., Tice, M. M., Allwood, A. C., Cable, M. L., Bosak, T., Broz, A., Caravaca, G., Clark, B. C., **Dehouck, E.**, Fairen, A., Gomez, F., Grotzinger, J. P., Gupta, S., Johnson, J. R., Kah, L. C., Kalucha, H., Labrie, J., Li, A. Y., Mandon, L., Nuñez, J., Pedersen, D. A. K., Poulet, F., Randazzo, N., Scheller, E. L., Schmidt, M. E., Shuster, D. L., Siebach, K. L., Siljeström, S., Simon, J. I., Tosca, N. J., Treiman, A. H., VanBommel, S. J., Wade, L. A., Williford, K. H., Yanchilina, A. (2023), The petrogenetic history of the Jezero crater delta front

from microscale observations by the Mars 2020 PIXL instrument, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2301](#)

[11] Cloutis, E. A., Sidhu, S., Applin, D. M., Wiens, R. C., Gasda, P., Connell, S. M., Mandon, L., Beck, P., Madariaga, J. M., **Dehouck, E.**, Johnson, J. R., Broz, A. P., Mayhew, L. E., Fouchet, T., Royer, C. (2023), Heated kaolinite/halloysite in the Barrier Range cobble, Jezero crater, Mars?, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2155](#)

[10] Cousin, A., Beyssac, O., Forni, O., Meslin, P.-Y., Martin, N., Chide, B., Hausrath, E. M., Sullivan, R., Poulet, F., **Dehouck, E.**, Lasue, J., Schröder, S., Gasnault, O., Pilleri, P., Wiens, R., Maurice, S., and the SuperCam science team (2023), Soil diversity on Mars: Comparison between Gale and Jezero craters, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1349](#)

[9] Lasue, J., Meslin, P.-Y., Cousin, A., Forni, O., Anderson, R., Beck, P., Beyssac, O., Brown, A., Clegg, S. M., **Dehouck, E.**, Frydenvang, J., Gasda, P., Gasnault, O., Hausrath, E., Le Mouélic, S., Maurice, S., Pilleri, P., Rapin, W., Wiens, R. C., and the SuperCam team (2023), SuperCam first shots: Dust composition and variability, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2244](#)

[8] Rapin, W., Dromart, G., Schieber, J., Clark, B. C., Kah, L., Rubin, D., Gupta, S., Roberts, A., Caravaca, G., Edgar, L., Sheppard, R. Y., **Dehouck, E.**, Le Mouélic, S., Bryk, A., Dietrich, W. E., Gasda, P., Gasnault, O., Lanza, N. (2023), Not always wet: An aridification sequence in the orbital clay-sulfate transition of Aeolis Mons, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2085](#)

[7] Royer, C., Poulet, F., Wiens, R. C., Mandon, L., Fouchet, T., Clavé, E., Montmessin, F., Forni, O., Johnson, J. R., Gasnault, O., Quantin-Nataf, C., **Dehouck, E.**, Beck, P., Le Mouélic, S., Caravaca, G., Pinet, P., Beyssac, O., Pilorget, C., Ollila, A. M., Brown, A., Maurice, S., and the SuperCam team (2023), Jezero delta mineralogical diversity revealed by SuperCam infrared spectral modeling, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1372](#)

[6] Schröder, S., Rammelkamp, K., Hansen, P. B., Seel, F., Cousin, A., Forni, O., Gasnault, O., Meslin, P.-Y., Pilleri, P., Rapin, W., Clavé, E., **Dehouck, E.**, Beyssac, O., Beck, P., Maurice, S., Wiens, R. C., Hübers, H.-W. (2023), Semiquantitative analysis of ChemCam and SuperCam LIBS data with spectral unmixing, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2014](#)

[5] Horgan, B., DufLOT, L., Garczynski, B., Gupta, S., Johnson, J. R., Kathir, B., Million, C.C., Núñez, J., Rice, M., St. Clair, M., Udry, A., Vaughan, A., Alwmark, S., **Dehouck, E.**, Hurowitz, J., Simon, J. I., Weiss, B. (2023), Provenance of sediments in the Jezero delta from Perseverance rover and orbital observations, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#3022](#)

[4] Lopez-Reyes, G., Nachon, M., Veneranda, M., Beyssac, O., Madariaga, J. M., Manrique, J. A., Clavé, E., Ollila, A., Castro, K., Sharma, S. K., Johnson, J. R., Schröder, S., Cloutis, E., **Dehouck, E.**, Huidobro, J., Martinez-Frias, J., Rull, F., Maurice, S., Wiens, R. C., the SuperCam Raman WG, and the SuperCam team (2023), Anhydrite detections by Raman spectroscopy with SuperCam at the Jezero delta, Mars, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1721](#)

[3] Beyssac, O., Chide, B., Cousin, A., Ayoub, F., Bertrand, T., Forni, O., Mandon, L., Beck, P., Johnson, J. R., Lasue, J., Clavé, E., Sullivan, R., Quantin-Nataf, C., Udry, A., **Dehouck, E.**, Poulet, F., Pilorget, C., Fouchet, T., Meslin, P.-Y., Gasnault, O., Maurice, S., Wiens, R. C. (2023), Coarse-grained olivine-rich regolith at Jezero crater, Mars: Nature, source and transport, *54th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1727](#)

[2] Gasda, P. J., Lanza, N., Rapin, W., Frydenvang, J., Goetz, W., Schwenzer, S. P., Dietrich, W. E., Weitz, C., Bryk, A., Kite, E., Lewis, K., Schieber, J., Fischer, W. W., Mondro,

C., Johnson, J., **Dehouck, E.**, Newsom, H. E., Essunfeld, A., Lasue, J., Gasnault, O., Clegg, S., Delapp, D. (2023), ChemCam observations of the Marker Band, Gale crater, Mars, 54th *Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2389](#)

[1] Castro, K., Arana, G., Población, I., Clegg, S. M., Gibbons, E. F., Manrique, J.-A., Gasda, P., Udry, A., Aramendia, J., Madariaga, J. M., Veneranda, M., Anderson, R. B., López-Reyes, G., Cousin, A., Forni, O., Lasue, J., Legett IV, C., Maurice, S., Ollila, A. M., Wiens, R. C., Beyssac, O., Brown, A. J., Clavé, E., **Dehouck, E.**, Fouchet, T., Gasnault, O., Lanza, N., Laserna, J., Martínez-Frías, J., Pilleri, P., Royer, C., Rull, F., and the SuperCam team (2023), Principal component analysis on the SuperCam-LIBS spectra of rock targets in the first 640 sols in Jezero crater, 54th *Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2348](#)

- 2022 (31) -

[31] **[Oral] Dehouck, E.**, Forni, O., Quantin-Nataf, C., Poulet, F., Meslin, P.-Y., Beck, P., Royer, C., Mandon, L., Johnson, J. R., Pilleri, P., Fouchet, T., Pilorget, C., Maurice, S., Wiens, R. C., and the SuperCam team (2022), High mineralogical diversity in the lower delta of Jezero crater, Mars, as seen from SuperCam near-infrared spectral measurements, *AGU Fall Meeting*, Chicago, IL, USA, [#P55A-04](#)

[30] Wiens, R. C., Maurice, S., Clegg, S. M., Cousin, A., **Dehouck, E.**, Udry, A., Beyssac, O., Quantin-Nataf, C., Mangold, N., Mandon, L., Forni, O., Benzerara, K., Johnson, J. R., Anderson, R. B., Gasda, P. J., Royer, C., Madariaga, J. M., Castro Ortiz de Pinedo, K., Arana, G., Meslin, P.-Y., Ollila, A. M., Legett IV, C., Poulet, F., Sharma, S. K., Comellas, J., Acosta-Maeda, T., Chide, B., Clavé, E., Hausrath, E., Simon, J. I., Bosak, T., Brown, A. J., Laserna, J., Alvarez, C., Lasue, J., Cloutis, E., Caravaca, G., Connell, S., Wolf, Z. U., Turenne, N., Sidhu, S., Ostwald, A. M., Le Mouélic, S., Lopez-Reyes, G., Manrique, J., Veneranda, M., Pilleri, P., Fouchet, T., Pilorget, C., Gabriel, T., Gibbons, E. F., Lanza, N., Larmat, C. S., Horgan, B. H. N., Nachon, M., Rapin, W., Manelski, H., Martínez-Frías, J., Pinet, P., and the SuperCam team (2022), Jezero crater floor and delta chemistry and mineralogy observed by SuperCam in the first 1.5 years of the Perseverance rover mission, *AGU Fall Meeting*, Chicago, IL, USA, [#P55A-07](#)

[29] Royer, C., Fouchet, T., Mandon, L., Clavé, E., Montmessin, F., Poulet, F., Forni, O., Johnson, J. R., Gasnault, O., Quantin-Nataf, C., **Dehouck, E.**, Beck, P., Benzerara, K. Le Mouélic, S., Caravaca, G., Brown, A. J., Pilorget, C., Ollila, A. M., Newell, R. T., Maurice, S., Wiens, R. C. (2022), Investigation on the clay-carbonate mixture with SuperCam/IRS, Perseverance rover, *AGU Fall Meeting*, Chicago, IL, USA, [#P52C-1554](#)

[28] Le Deit, L., Caravaca, G., Mangold, N., Le Mouélic, S., **Dehouck, E.**, Bedford, C. C., Wiens, R. C., Johnson, J. R., Gasnault, O., Forni, O., and Lanza, N. (2022), Investigation of the stratigraphic and chemical relationships between Bradbury and Siccar Point lithostratigraphic groups in Gale crater, Mars, *Europlanet Science Congress*, Granada, Spain, [#508](#)

[27] Rapin, W., Sheppard, R., Dromart, G., Schieber, J., Clark, B., Kah, L., Rubin, D., Ehlmann, B., Gupta, S., Caravaca, G., Mangold, N., **Dehouck, E.**, Le Mouélic, S., Gasnault, O., Clark, J., Bryk, A., Dietrich, W., Lanza, N., Wiens, R., (2022), The Curiosity rover investigates an aridification sequence in the layered sulfate-bearing unit, *Europlanet Science Congress*, Granada, Spain, [#1112](#)

[26] Udry, A., Ostwald, A., Sautter, V., Cousin, A., Wiens, R. C., Forni, O., Benzerara, K., Beyssac, O., Nachon, M., Dromart, G., Quantin, C., Mandon, L., Clavé, E., Pinet, P., Ollila, A., Bosak, T., Mangold, N., **Dehouck, E.**, Johnson, J., Schmidt, M., Horgan, B., Gabriel, T., McLennan, S., Maurice, S., Simon, J. I., Herd, C. D. K., Madariaga, J. M., Brown, A., Connell, S., Flannery, D., Tosca, N., Cohen, B., Liu, Y., McCubbin, F., Cloutis, E., Fouchet, T., Royer, C., Alwmark, S., Sharma, S., Anderson, R., Pilleri, P. (2022), A comparison of the

igneous Máaz formation at Jezero crater with martian meteorites, *85th Annual Meeting of the Meteoritical Society*, Glasgow, Scotland, [#6089](#)

[25] **[Oral] Dehouck, E.**, Cousin, A., Mangold, N., Frydenvang, J., Gasnault, O., Forni, O., Rapin, W., Gasda, P., Caravaca, G., David, G., Bedford, C. C., Lasue, J., Meslin, P.-Y., Rammelkamp, K., Desjardins, M., Le Mouélic, S., Thorpe, M. T., Fox, V. K., Bennett, K. A., Bryk, A. B., Lanza, N., Maurice, S., Wiens, R.C. (2022), Formation and destruction of clay minerals in Glen Torridon, Gale crater, Mars, *23rd General Meeting of the International Mineralogical Association*, Lyon, France, #1355

[24] Clavé, E., Beyssac, O., Cousin, A., Udry, A., **Dehouck, E.**, Bousquet, B., Wiens, R. C., Maurice, S., and the SuperCam team (2022), Chemistry and mineralogy characterization in Jezero Crater, Mars, with SuperCam, *23rd General Meeting of the International Mineralogical Association*, Lyon, France, #1598

[23] Beck, P., Mandon, L., Quantin-Nataf, C., Forni, O., Fouchet, T., Royer, C., Poulet, F., **Dehouck, E.**, Johnson, J., Cousin, A., Gasnault, O., Le Mouélic, S., Meslin, P.-Y., Pinet, P., Benzerara, K., Beyssac, O., Legett, C., Brown, A., Wiens, R., Maurice, S., and the SuperCam VISIR Working Group (2022), Secondary minerals on the floor of Jezero crater probed by SuperCam VISIR spectroscopy, *23rd General Meeting of the International Mineralogical Association*, Lyon, France, #1363

[22] Cousin, A., Meslin, P.-Y., Beyssac, O., Forni, O., Lasue, J., Hausrath, E., Schroeder, S., **Dehouck, E.**, Gasda, P., Beck, P., Poulet, F., Mandon, L., Quantin-Nataf, C., Pilleri, P., Wiens, R., Maurice, S. (2022), Soil diversity: comparison between Jezero and Gale Craters, Mars, *23rd General Meeting of the International Mineralogical Association*, Lyon, France, #1489

[21] Beyssac, O., Forni, O., Cousin, A., Udry, A., Benzerara, K., Ostwald, A., Gasnault, O., Clavé, E., Mandon, L., Johnson, J. R., Poulet, F., Beck, P., Kah, L., Royer, C., Quantin-Nataf, C., Liu, Y., **Dehouck, E.**, Chide, B., Ollila, A., Meslin, P.-Y., Lasue, J., Mangold, N., Clegg, S., Pilleri, P., Lopez Reyes, G., Manrique, J. A., Wiens, R., Maurice, S. (2022), An olivine cumulate unit on the floor of Jezero Crater, Mars, *23rd General Meeting of the International Mineralogical Association*, Lyon, France, #1542

[20] Udry, A., Ostwald, A., Sautter, V., Cousin, A., Beyssac, O., Forni, O., Dromart, G., Benzerara, K., Nachon, M., Mangold, N., Horgan, B., Clavé, E., Wiens, R., Pinet, P., Quantin, C., Mandon, L., Ollila, A., Legett, C., Bosak, T., **Dehouck, E.**, Gibbons, E., Johnson, J., Beck, P., Gabriel, T., Simon, J., Herd, C., Madariaga, J. M., Brown, A., Schmidt, M., McLennan, S., Maurice, S., Connell, S., Flannery, D., Tosca, N., Cohen, B., Liu, Y., McCubbin, F., Cloutis, E., Fouchet, T., Royer, C., Alwmark, S., Sharma, S., Anderson, R., Pilleri, P. (2022), Pyroxene-rich lava flows in the Máaz formation at Jezero crater: a SuperCam investigation, *23rd General Meeting of the International Mineralogical Association*, Lyon, France, #1534

[19] Rammelkamp, K., Gasnault, O., Forni, O., **Dehouck, E.**, Bedford, C. C., Cousin, A., Schröder, S., Lasue, J., Wiens, R. C., Lanza, N. (2022), Tensor component analysis for the investigation of depth trends in ChemCam LIBS data from Gale crater, Mars, *Planetary Science Informatics and Data Analytics Conference*, Madrid, Spain, [#M02](#)

[18] Mandon, L., Quantin-Nataf, C., Royer, C., Beck, P., Fouchet, T., **Dehouck, E.**, Forni, O., Johnson, J. R., Poulet, F., Montmessin, F., Le Mouélic, S., Gasnault, O., Maurice, S., Wiens, R. C. (2022), Alteration minerals assemblage on the floor of Jezero crater, Mars: one year of SuperCam IR observations onboard the Perseverance rover, *Goldschmidt Conference*, Honolulu, Hawaii, USA, #10581

[17] Quantin-Nataf, C., Mandon, L., Royer, C., Beck, P., Montmessin, F., Forni, O., Le Mouélic, S., Poulet, F., Johnson, J., Fouchet, T., **Dehouck, E.**, Brown, A., Tarnas, J., Pilleri, P., Gasnault, O., Mangold, N., Maurice, S., Wiens, R. (2022), Infrared reflectance of Jezero geological units from SuperCam/Mars 2020 observations, *EGU General Assembly*, Vienna,

[16] Meslin, P.-Y., Forni, O., Loche, M., Fabre, S., Lanza, N., Gasda, P., Treiman, A., Berger, J., Cousin, A., Gasnault, O., Rapin, W., Lasue, J., Mangold, N., **Dehouck, E.**, Dromart, G., Maurice, S., Wiens, R. C. (2022), Overview of secondary phosphate facies observed by ChemCam in Gale crater, Mars, *EGU General Assembly*, Vienna, Austria, #6613

[15] Cousin, A., Meslin, P.-Y., **Dehouck, E.**, David, G., Lasue, J., Forni, O., Schröder, S., Wiens, R., Maurice, S., Gasnault, O., Lanza, N. (2022), Classification of soils at Gale along the traverse: a ChemCam perspective, *53rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1258](#)

[14] Smith, R. J., McLennan, S. M., **Dehouck, E.**, Rampe, E. B., Sutter, B., Siebach, K. L., Horgan, B. H. N., Sun, V., McAdam, A., Mangold, N., Vaniman, D., Salvatore, M., Thorpe, M. T., Achilles, C. N., Gabriel, T., Czarnecki, S. (2022), X-ray amorphous sulfur-bearing phases in sedimentary rocks of Gale crater, Mars, *53rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1661](#)

[13] Rammelkamp, K., Gasnault, O., Forni, O., **Dehouck, E.**, Bedford, C. C., Lasue, J., Cousin, A., Schröder, S., Wiens, R. C., Lanza, N. (2022), Tensor component analysis as a tool for investigating depth trends in ChemCam LIBS data from Gale crater, Mars, *53rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1999](#)

[12] Meslin, P.-Y., Rapin, W., Forni, O., Cousin, A., Gasnault, O., Loche, M., **Dehouck, E.**, Mangold, N., Caravaca, G., Schröder, S., Gasda, P., Le Mouélic, S., Lasue, J., Frydenvang, J., Clark, B., Fairen, A. G., Maurice, S., Wiens, R. C., Lanza, N. (2022), Significant halite enrichment in the Sulfate unit of Gale crater, Mars, *53rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1190](#)

[11] Lasue, J., Meslin, P.-Y., Cousin, A., Forni, O., Anderson, R., Beck, P., Clegg, S. M., **Dehouck, E.**, Frydenvang, J., Gasda, P., Gasnault, O., Hausrath, E., Le Mouélic, S., Maurice, S., Pilleri, P., Rapin, W., Wiens, R. C., and the SuperCam team (2022), Comparison of dust between Gale and Jezero, *53rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1758](#)

[10] David, G., Cousin, A., Forni, O., Schröder, S., Rammelkamp, K., Lévillé, R., Gibbons, E., Thomas, N. H., Meslin, P.-Y., **Dehouck, E.**, Lasue, J., Rapin, W., Gasnault, O., Wiens, R. C., Lanza, N. L., Maurice, S. (2022), Clay mineral analyses with the ChemCam instrument at the Marimba, Quela and Sebina drill locations, in Gale crater, Mars, *53rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2492](#)

[9] Comellas, J. M., Essunfeld, A., Morris, R., Lanza, N., Gasda, P. J., Delapp, D., Wiens, R. C., Gasnault, O., Clegg, S., Bedford, C. C., **Dehouck, E.**, Clark, B. C., Anderson, R., Fisher, W., Lueth, V. (2022), Evidence of multiple fluid events in elevated-Mn ChemCam targets in the Bradbury Rise, Gale crater, Mars, *53rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2445](#)

[8] Cousin, A., Meslin, P.-Y., Hausrath, E. M., Cardarelli, E., Lasue, J., Forni, O., Beyssac, O., Kah, L. C., Mandon, L., Gasnault, O., **Dehouck, E.**, Poulet, F., Quantin-Nataf, C., Pilleri, P., Gasda, P., Schröder, S., Wiens, R., Maurice, S., and the SuperCam team (2022), Soil diversity at Mars: Comparison of dataset from Gale and Jezero craters, *53rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1374](#)

[7] Essunfeld, A., Comellas, J. M., Gasda, P. J., Oyen, D., Lanza, N., Gasnault, O., Delapp, D., Wiens, R., Clegg, S., Bedford, C. C., **Dehouck, E.**, Clark, B., Anderson, R. (2022), Grouping ChemCam targets by visual characteristics improved by automatic partitioning, *53rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2612](#)

[6] Mandon, L., Quantin-Nataf, C., Royer, C., Beck, P., Fouchet, T., Johnson, J. R., Forni, O., Montmessin, F., Pilorget, C., Poulet, F., Le Mouélic, S., **Dehouck, E.**, Beyssac, O., Brown,

A., Tarnas, J., Maurice, S., Wiens, R. C., and the SuperCam team (2022), Infrared reflectance of rocks and regolith at Jezero crater: One year of SuperCam observations, *53rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1631](#)

[5] Rapin, W., Sheppard, R. Y., Dromart, G., Schieber, J., Clark, B. C., Kah, L., Rubin, D., Ehlmann, B. L., Gupta, S., Caravaca, G., Mangold, N., **Dehouck, E.**, Le Mouélic, S., Gasnault, O., Clark, J. V., Bryk, A., Dietrich, B., Wiens, R. C., (2022), The Curiosity rover is exploring a key sulfate-bearing orbital facies, *53rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2473](#)

[4] Poulet, F., Royer, C., Beck, P., Mandon, L., Quantin-Nataf, C., Johnson, J. R., Beyssac, O., Forni, O., Cousin, A., Montmessin, F., Pilorget, C., Le Mouélic, S., **Dehouck, E.**, Brown, A., Tarnas, J., Benzerara, K., Fouchet, T., Maurice, S., Wiens, R. C., and the SuperCam team (2022), Modal mineralogy of Seitah unit in Jezero crater (Mars) retrieved from nonlinear unmixing analyses of IRS/SuperCam, *53rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2032](#)

[3] Udry, A., Sautter, V., Cousin, A., Wiens, R. C., Forni, O., Benzerara, K., Beyssac, O., Nachon, M., Dromart, G., Quantin, C., Mandon, L., Clavé, É., Pinet, P., Ollila, A., Bosak, T., Mangold, N., Dehouck, E., Johnson, J., Schmidt, M., Horgan, B., Gabriel, T., McLennan, S., Maurice, S., Simon, J. I., Herd, C. D. K., Madiaraga, J. M. (2022), A Mars 2020 Perseverance SuperCam perspective on the igneous nature of the Máaz formation at Jezero crater, Mars, *53rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2257](#)

[2] Meslin, P.-Y., Forni, O., Beck, P., Cousin, A., Beyssac, O., Lopez-Reyes, G., Benzerara, K., Ollila, A., Mandon, L., Wiens, R. C., Clegg, S., Montagnac, G., Clavé, E., Manrique, J.-A., Chide, B., Maurice, S., Gasnault, O., Lasue, J., Quantin-Nataf, C., **Dehouck, E.**, Sharma, S. K., Arana, G., Madariaga, J. M., Castro, K., Schröder, S., Mangold, N., Poulet, F., Johnson, J., Le Mouélic, S., Zorzano, M.-P., and the SuperCam team (2022), Evidence for perchlorate and sulfate salts in Jezero crater, Mars, from SuperCam observations, *53rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2694](#)

[1] Wiens, R. C., Udry, A., Mangold, N., Beyssac, O., Quantin, C., Sautter, V., Cousin, A., Brown, A., Bosak, T., Mandon, L., Forni, O., Johnson, J. R., McLennan, S., Legett IV, C., Maurice, S., Mayhew, L., Crumpler, L., Anderson, R. B., Clegg, S. M., Ollila, A. M., Hall, J., Meslin, P.-Y., Kah, L. C., Gabriel, T.S.J., Gasda, P., Simon, J. I., Hausrath, E. M., Horgan, B., Poulet, F., Beck, P., Gupta, S., Chide, B., Clavé, E., Connell, S., **Dehouck, E.**, Dromart, G., Fouchet, T., Royer, C., Frydenvang, J., Gasnault, O., Gibbons, E., Kalucha, H., Lanza, N., Lasue, J., Le Mouélic, S., Léveillé, R., Cloutis, E., Lopez Reyes, G., Arana, G., Castro, K., Madariaga, J. M., Manrique, J.-A., Pilorget, C., Pinet, P., Laserna, J., Sharma, S. K., Acosta-Maeda, T., Kelly, E., Montmessin, F., Fischer, W., Francis, R., Stack, K., Farley, F., and the SuperCam team (2022), Composition and density stratification observed by SuperCam in the first 300 sols in Jezero crater, *53rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2075](#)

- 2021 (32) -

[32] Frydenvang, J., Gasda, P. J., **Dehouck, E.**, Pan, L., Clark, B. C., Bristow, T., Wiens, R. C., Maurice, S., Lanza, N., Gasnault, O. (2021), Evolving bedrock geochemistry observed by ChemCam as the Curiosity rover enters the orbitally defined sulfate unit on Aeolis Mons in Gale crater, Mars, *AGU Fall Meeting*, New Orleans, LA, USA

[31] Cousin, A., Meslin, P.-Y., Hausrath, E., Lasue, J., Cardarelli, E., Beyssac, O., Forni, O., **Dehouck, E.**, Mandon, L., Gasnault, O., Quantin-Nataf, C., Schröder, S., Clegg, S. M., Anderson, R. B., Pilleri, P., Brown, A. J., Maurice, S., Wiens, R. C., and the SuperCam team (2021), Fine-grained regolith on Mars: Comparison between Gale and Jezero craters using ChemCam and SuperCam LIBS data, *AGU Fall Meeting*, New Orleans, LA, USA

[30] Ollila, A. M., Gibbons, E. F., Chide, B., Lanza, N., Bosak, T., Forni, O., Cousin, A., Hausrath, E., Benzerara, K., **Dehouck, E.**, Beck, P., Frydenvang, J., Beyssac, O., Wiens, R. C., Laserna, J., Schröder, S., Clave, E., Newell, A., Connell, S., Alvarez, C., Brown, A. J., Jacob, X., Gabriel, T., Fouchet, T., Moros, J. (2021), Analysis of potential surface coatings in Jezero crater by SuperCam on the Perseverance rover, *AGU Fall Meeting*, New Orleans, LA, USA

[29] Quantin-Nataf, C., Mandon, L., Gasnault, O., Royer, C., Beck, P., Forni, O., Montmessin, F., Le Mouélic, S., Fouchet, T., **Dehouck, E.**, Poulet, F., Johnson, J. R., Brown, A. J., Tarnas, J. D., Pilleri, P., Mangold, N., Maurice, S., Wiens, R. C., and the SuperCam team (2021), Long distance observations of Jezero crater's geological units by the SuperCam instrument onboard Perseverance/Mars2020, *AGU Fall Meeting*, New Orleans, LA, USA

[28] Mandon, L., Royer, C., Beck, P., Quantin-Nataf, C., Fouchet, T., Poulet, F., Montmessin, F., Johnson, J. R., Forni, O., Le Mouélic, S., **Dehouck, E.**, Pilleri, P., Legett, C., Brown, A. J., Cloutis, E., Gasnault, O., Maurice, S., Wiens, R. C., and the SuperCam team (2021), Spectral diversity of rocks and regolith at Jezero crater, Mars, as seen by the SuperCam VISIR spectrometer onboard Perseverance, *AGU Fall Meeting*, New Orleans, LA, USA

[27] Anderson, R. B., Forni, O., Frydenvang, J., Cousin, A., Clegg, S. M., Wiens, R. C., Legett, C., Pilleri, P., Maurice, S., Arana, G., Beyssac, O., Bousquet, B., Chide, B., Clave, E., **Dehouck, E.**, Delapp, D., Essunfeld, A., Fouchet, T., Gabriel, T., Garcia-Florentino, C., Gasnault, O., Gibbons, E. F., Laserna, J., Lasue, J., Manrique, J., Madariaga, J. M., Newell, R. T., Ollila, A. M., Schröder, S., Sharma, S. K., Simon, J. I., Sobron, P., Vogt, D. (2021), Initial major element quantification using SuperCam laser induced breakdown spectroscopy, *AGU Fall Meeting*, New Orleans, LA, USA

[26] Beyssac, O., Gasnault, O., Chide, B., Clave, E., Cousin, A., Forni, O., Royer, C., Johnson, J. R., Benzerara, K., Clegg, S. M., Meslin, P.-Y., Pilleri, P., Willis, P. A., Lasue, J., Mandon, L., Ollila, A., Beck, P., Kelemen, P. B., **Dehouck, E.**, Anderson, R. B., Schröder, S., Udry, A., Gabriel, T. S. J., Bosak, T., Turenne, N., Connell, S., Zorzano, M.-P., Quantin-Nataf, C., Brown, A. J., Manrique, J., Fouchet, T., Sautter, V., Le Mouélic, S., Sharma, S. K., Cloutis, E., Pinet, P., Maurice, S. and Wiens, R. C. (2021), Mafic chemistry and mineralogy (including olivine) of the coarse-grained regolith analyzed by SuperCam at Jezero crater, Mars, *AGU Fall Meeting*, New Orleans, LA, USA

[25] Bedford, C., Banham, S., Bridges, J., Forni, O., Cousin, A., Bowden, D., Turner, S., Wiens, R., Gasda, P., Frydenvang, J., Rivera-Hernandez, F., Rampe, E., Smith, R., Achilles, C., **Dehouck, E.**, Bryk, A., Schwenzer, S., Newsom, H. (2021), An insight into a changing world – the transportation, deposition, and lithification of ancient aeolian soils preserved in the Stimson formation in Gale crater, Mars, *ASA, CSSA, SSSA International Annual Meeting*, Salt Lake City, UT, USA

[24] Blazon-Brown, A., Wiens, R. C., Melikechi, N., Frydenvang, J., **Dehouck, E.**, Clegg, S. M., Delapp, D., Anderson, R. B., Forni, O., Cousin, A., Gasnault, O., Maurice S. (2021), Studying the effects of distance (2 m – 7 m) on LIBS measurements using the ChemCam instrument on Mars and in the lab, *SciX conference*, Providence, RI, USA

[23] **Dehouck, E.**, Cousin, A., Mangold, N., Frydenvang, J., Gasnault, O., Rammelkamp, K., Rapin, W., Forni, O., Gasda, P. J., David, G., Caravaca, G., Lasue, J., Meslin, P.-Y., Bedford, C. C., Lanza, N. L., Fox, V. K., Bennett, K. A., Bryk, A. B., Maurice, S., Wiens, R. C. (2021), Bedrock geochemistry measured by ChemCam along a 2-km eastward traverse in the Glen Torridon region, Gale crater, Mars, *Europlanet Science Congress*, virtuel, #595

[22] Lasue, J., Meslin, P.-Y., Cousin, A., Forni, O., Anderson, R., **Dehouck, E.**, Frydenvang, J., Gasnault, O., Rapin, W., Pilleri, P., Clegg, S. M., Maurice, S., Wiens, R. C. (2021), Comparing SuperCam first shots at Jezero with ChemCam eolian dust analysis at Gale, *Europlanet Science Congress*, virtuel, #254

[21] Cousin, A., Anderson, R., Forni, O., Benzerara, K., Mangold, N., Beck, P., **Dehouck, E.**, Ollila A., Meslin, P.-Y., Gibbons, E., Gasnault, O., Beyssac, O., Lasue, J., Frydenvang, J., Vogt, D., Pilleri, P., Schröder, S., Clegg, S., Maurice, S., Wiens, R. (2021), Observations of rocks in Jezero landing site: SuperCam/LIBS technique overview of results from the first six months of operations, *Europlanet Science Congress*, virtuel, #138

[20] Chide, B., Lanza, N., Alvarez, C., Angel, S., Bernardi, P., Beyssac, O., Bousquet, B., Cadu, A., Clavé, É., **Dehouck, E.**, Fouchet, T., Gasnault, O., Jacob, X., Laserna, J., Lorenz, R., Murdoch, N., Stott, A., Maurice, S., Wiens, R., Mimoun, D., and the SuperCam Acoustics Working Group (2021), The Supercam Microphone to support LIBS investigation on Mars: review of the first laser-spark recordings, *Europlanet Science Congress*, virtuel, #138

[19] Mandon, L., Quantin-Nataf, C., Beck, P., Fouchet, T., Royer, C., Montmessin, F., Forni, O., Johnson, J. R., Gasnault, O., **Dehouck, E.**, Poulet, F., Brown, A., Tarnas, J. D., Le Mouélic, S., Bernardi, P., Reess, J.-M., Newell, R. T., Maurice, S., Wiens, R. C. (2021), Observing rocks in Jezero crater, Mars: results of the first months of operation of the SuperCam VISIR spectrometer, *Europlanet Science Congress*, virtuel, #534

[18] Quantin-Nataf, C., Mandon, L., Royer, C., Tarnas, J., Beck, P., Montmessin, F., Forni, O., Le Mouélic S., Fouchet, T., Gasnault, O., **Dehouck, E.**, Poulet, F., Johnson, J., Brown, A., Pilleri, P., Horgan, B., Ehlmann, B., Mangold, N., Wiens, R., Maurice, S. (2021), Comparison of orbital and in situ NIR-spectra in Jezero crater: insight from the first SuperCam Infrared Spectrometer data, *Europlanet Science Congress*, virtuel, #532

[17] **Dehouck, E.**, Cousin, A., Mangold, N., Frydenvang, J., Gasnault, O., Rapin, W., Forni, O., Gasda, P. J., David, G., Caravaca, G., Lasue, J., Meslin, P.-Y., Bedford, C. C., Lanza, N. L., Fox, V. K., Bennett, K. A., Bryk, A. B., Maurice, S., Wiens, R. C. (2021), Leaving Glen Torridon: Bedrock geochemistry measured by ChemCam en route to the sulfate unit of Gale crater, *52nd Lunar and Planetary Science Conference*, virtuel, [#1858](#)

[16] Forni, O., **Dehouck, E.**, Cousin, A., Bedford, C. C., David G., Schwenzer, S. P., Bridges, J. C., Gasnault, O., Meslin, P.-Y., Webster, C. R., Rampe, E. B., Clegg, S. M., Gasda, P., Lasue, J., Maurice, S., Wiens, R. C. (2021), Elevated fluorine abundances below the Siccar Point unconformity: Implications for fluid circulation in Gale crater, *52nd Lunar and Planetary Science Conference*, virtuel, [#1503](#)

[15] Caravaca, G., Mangold, N., **Dehouck, E.**, Schieber, J., Bryk, A. B., Fedo, C. M., Le Mouélic, S., Banham, S. G., Gupta, S., Cousin, A., Rapin, W., Gasnault, O., Wiens, R. C. (2021), Evidence of depositional settings variation at the Jura/Knockfarril Hill members transition in the Glen Torridon region (Gale crater, Mars), *52nd Lunar and Planetary Science Conference*, virtuel, [#1455](#)

[14] Cousin, A., Desjardins, M., **Dehouck, E.**, Forni, O., David, G., Berger, G., Caravaca, G., Meslin, P.-Y., Lasue, J., Ollila, A., Rapin, W., Gasda, P., Maurice, S., Gasnault, O., Wiens, R. (2021), K-rich rubbly bedrock at Glen Torridon, Gale crater, Mars: Investigating the possible presence of illite, *52nd Lunar and Planetary Science Conference*, virtuel, [#2127](#)

[13] Smith, R. J., McLennan, S. M., Achilles, C. N., **Dehouck, E.**, Horgan B. N., Mangold, N., Rampe, E. B., Salvatore, M., Siebach, K., Sun, V. (2021), X-ray amorphous sulfates in Gale crater, Mars, *52nd Lunar and Planetary Science Conference*, virtuel, [#1486](#)

[12] David, G., Cousin, A., Forni, O., Meslin, P.-Y., **Dehouck, E.**, Gasnault, O., Gasda, P. J., Wiens, R. C., Maurice, S. (2021), Chemical characterization of Fe-rich diagenetic nodules with ChemCam in the Glen Torridon region, Gale crater, Mars, *52nd Lunar and Planetary Science Conference*, virtuel, [#1433](#)

[11] Rammelkamp, K., Gasnault, O., Forni, O., Bedford, C. C., **Dehouck, E.**, Lasue, J., Cousin, A., Maurice, S., Wiens, R. C. (2021), Optimization of clustering analysis for classification of ChemCam data from Gale crater, Mars, *52nd Lunar and Planetary Science Conference*, virtuel, [#1463](#)

[10] Fox, V. K., Bennett, K. A., Bryk, A. B., Fedo, C., Arvidson, R., **Dehouck, E.**, Ehlmann, B., and the MSL science team (2021), Contextualizing CRISM observations of the clay-bearing Glen Torridon region with the Mars Science Laboratory Curiosity rover, *52nd Lunar and Planetary Science Conference*, virtuel, [#2765](#)

[9] Gasda, P. J., Comellas, J., Essunfeld, A., Das, D., Nellesen, M., **Dehouck, E.**, Anderson, R., Rapin, W., Lanza, N., Meslin, P.-Y., David, G., Crossey, L., Newsom, H., Hoffman, M., Fey, D., Kronyak, R., Frydenvang, J., Bridges, J., Turner, S., Schwenzer, S., Wiens, R. C., Clegg, S., Maurice, S., Gasnault, O. (2021), The chemistry and morphology of diagenetic features in Glen Torridon, Gale crater, *52nd Lunar and Planetary Science Conference*, virtuel, [#1271](#)

[8] Lanza, N. L., Gasda, P. J., Essunfeld, A., Comellas J., Caravaca, G., Rampe, E., Williams, A., Meslin P.-Y., **Dehouck, E.**, Mangold, N., Rapin, W., Hazen, R., Fischer, W. W., Ollila, A. M., House, C., Wiens, R. C. (2021), Chemistry of manganese-bearing materials at the Groken drill site, Gale crater, Mars, *52nd Lunar and Planetary Science Conference*, virtuel, [#2231](#)

[7] Bedford, C. C., Banham, S., Bowden, D., Bridges, J. C., Smith, R., Forni, O., Cousin, A., Rivera-Hernandez, F., Achilles, C., **Dehouck, E.**, Wiens, R. C., Rammelkamp, K., Gasda, P., Frydenvang, J., Gasnault, O., Rampe, E. B., Schwenzer, S. P. (2021), Identifying ancient dune processes in the Stimson formation of Gale crater using geochemical data from ChemCam: New insights from the Greenheugh capping unit, *52nd Lunar and Planetary Science Conference*, virtuel, [#1569](#)

[6] Comellas, J. M., Essunfeld, A., Lanza, N., Gasda, P. J., Delapp, D., Wiens, R. C., Gasnault, O., Clegg, S., Bedford, C., **Dehouck, E.**, Clark, B., Anderson, R., Fisher, W., Lueth, V. (2021), Geologic interpretations of elevated-Mn ChemCam targets in the Bradbury Rise, Gale crater, Mars, *52nd Lunar and Planetary Science Conference*, virtuel, [#2176](#)

[5] Essunfeld, A., Comellas, J. M., Lanza, N., Gasda, P. J., Delapp, D., Wiens, R. C., Gasnault, O., Clegg, S., Bedford, C., **Dehouck, E.**, Clark, B., Anderson, R. (2021), Attribute recognition for grouping elevated-manganese ChemCam targets by visual characteristics, *52nd Lunar and Planetary Science Conference*, virtuel, [#2180](#)

[4] Quantin-Nataf C., Holm-Alwmark, S., Lasue, J., Calef, F. J., Shuster, D., Kinch, K. M., Stack, K. M., Sun, V., Williams, N. R., **Dehouck, E.**, Brown, A. (2021), The complex exhumation history of Jezero Crater Floor unit, *52nd Lunar and Planetary Science Conference*, virtuel, [#2034](#)

[3] Le Mouélic, S., Gasnault, O., Rapin, W., Bryk, A. B., Dietrich, W. E., Dromart, G., Wiens, R. C., Caravaca, G., Mangold, N., Newsom, H., **Dehouck, E.**, Pinet, P., Herkenhoff, K. E. (2021), Housedon Hill — A ChemCam RMI mega mosaic to investigate distant features in Gale crater, *52nd Lunar and Planetary Science Conference*, virtuel, [#1408](#)

[2] Beyssac, O., Ollila, A. M., Arana, G., Angel, S. M., Benzerara, K., Bernard, S., Bernardi, P., Bousquet, B., Castro, K., Clavé, E., Clegg, S., Cousin, A., **Dehouck, E.**, Delapp, D., Egan, M., Forni, O., Gasnault, O., Legett, C., Lopez-Reyes, G., Madariaga, J. M., Manrique, J. A., Maurice, S., Meslin, P.-Y., Montagnac, G., Nelson, T., Newell, R., Pilleri, P., Robinson, S., Rull, F., Schroeder, S., Sharma, S. K., Torre-Fdez, I., Wiens, R. C., Willis, P., and the SuperCam science team (2021), SuperCam's Time-Resolved Raman and Luminescence spectroscopy onboard the Perseverance rover, *52nd Lunar and Planetary Science Conference*, virtuel, [#1499](#)

[1] Wiens, R. C., Maurice, S., Gasnault, O., Anderson, R. B., Beyssac, O., Bonal, L., Clegg, S., Deflores, L., Dromart, G., Fischer, W. W., Forni, O., Grotzinger, J. P., Johnson, J. R., Martinez-Frias, J., Mangold, N., McLennan, S., Montmessin, F., Rull, F., Sharma, S. K., Cousin, A., Pilleri, P., Sautter, V., Lewin, E., Cloutis, E., Poulet, F., Bernard, S., McConnochie, T., Lanza, N., Newsom, H., Ollila, A., Leveille, R., Le Mouélic, S., Lasue, J., Melikechi, N., Meslin, P.-Y.,

Grasset, O., Angel, S. M., Fouchet, T., Beck, P., Bousquet, B., Fabre, C., Pinet, P., Benzerara, K., Montagnac, G., Arana, G., Castro, K., Laserna, J., Madariaga, J. M., Manrique, J.-A., Lopez, G., Lorenz, R., Mimoun, D., Acosta-Maeda, T., Alvarez, C., **Dehouck, E.**, Delory, G., Doressoundiram, A., Francis, R., Frydenvang, J., Gabriel T., Jacob, X., Madsen, M. B., Moros, J., Murdoch, N., Newell, R., Porter, J., Quantin-Nataf, C., Rapin, W., Schröder, S., Sobron, P., Toplis, M., Brown, A. J., Veneranda, M., Chide, B., Legett, C., Royer, C., Stott, A., Vogt, D., Robinson, S., Delapp, D., Clavé, E., Connell, S., Essunfeld, A., Gallegos, Z., Garcia-Florentino, C., Gibbons, E., Huidobro, J., Kelly, E., Kalucha, H., Ruiz, P., Torre-Fdez, I., Shkolyar, S., and the SuperCam team (2021), SuperCam on the Perseverance rover for exploration of Jezero crater: Remote LIBS, VISIR, Raman, and Time-Resolved Luminescence spectroscopies plus micro-imaging and acoustics, *52nd Lunar and Planetary Science Conference*, virtuel, [#1182](#)

- 2020 (20) -

[20] **[Oral] Dehouck, E.**, Cousin, A., Mangold, N., Forni, O., Gasnault, O., Meslin, P.-Y., Gasda, P. J., Bedford, C. C., Frydenvang, J., Lasue, J., Rapin, W., David, G., Maurice, S., Wiens, R. C. (2020), Evidence for mobile element recharge in the Murray formation near the Siccar Point unconformity (Glen Torridon, Gale crater, Mars), *AGU Fall Meeting*, virtuel

[19] Gasda, P. J., Nellesen, M., Das, D., **Dehouck, E.**, Kronyak, R., Fey, D. M., Rapin, W., Meslin, P.-Y., Newsom, H. E., Hoffman, M., Frydenvang, J., Wiens, R. C., Gasnault, O., Clegg, S. M., Maurice, S. (2020), Tracking changes in chemistry of diagenetic features in Glen Torridon, Gale crater, Mars with ChemCam, *AGU Fall Meeting*, virtuel

[18] Smith, R. J., McLennan, S. M., Achilles, C. N., **Dehouck, E.**, Horgan, B. H. N., Mangold, N., Rampe, E. B., Salvatore, M. R., Siebach, K. L., Sun, V. Z. (2020), Evidence for extensive diagenesis in Gale crater, Mars from X-ray amorphous component compositions, *AGU Fall Meeting*, virtuel

[17] Bedford, C. C., Banham, S., Bowden, D. L., Bridges, J., Forni, O., Cousin, A., Gasda, P. J., Rampe, E. B., Gasnault, O., **Dehouck, E.**, Frydenvang, J., Wiens, R. C., Smith, R., Schwenzer, S. P., Bryk, A. (2020), Identifying ancient dune processes in the Stimson formation of Gale crater from the Greenheugh pediment to the Emerson Plateau using geochemical data from ChemCam, *AGU Fall Meeting*, virtuel

[16] **[Oral] Dehouck E.**, Cousin, A., Mangold, N., Frydenvang, J., Gasnault, O., David, G., Lasue, J., Meslin, P.-Y., Rapin, W., Gasda, P., Forni, O., Fox, V. K., Bennett, K. A., Maurice, S., Wiens, R. C. (2020), Geochemical signatures of Martian clay minerals at Glen Torridon, Gale crater, *57th Annual Meeting of the Clay Minerals Society*, virtuel

[15] Fox, V. K., Bennett, K. A., Arvidson, R. E., Ehlmann, B. L., **Dehouck, E.**, Rampe, E. B. (2020), Martian clay minerals from orbit to the surface: MSL and MER rover investigations of CRISM smectite detections, *57th Annual Meeting of the Clay Minerals Society*, virtuel

[14] Caravaca G., Mangold, N., Le Deit, L., Le Mouélic, S., **Dehouck, E.**, Gasnault, O., Edgett, K. S., Rivera-Hernández, F., Fedo, C. M., Wiens, R. C. (2020), Using 3D reconstructions of centimeter-scale sedimentary structures to document changes in the depositional settings of Glen Torridon region (Gale crater, Mars), *Europlanet Science Congress*, virtuel, #49

[13] **[Oral] Dehouck, E.**, Cousin, A., Mangold, N., Frydenvang, J., Gasnault, O., David, G., Lasue, J., Meslin, P.-Y., Rapin, W., Gasda, P., Forni, O., Fox, V. K., Bennett, K. A., Maurice, S., Wiens, R. C. (2020), Is the clay-bearing unit distinct in Gale crater? Geochemical diversity and open-system alteration revealed by MSL and ChemCam at Glen Torridon, Mars, *51st Lunar and Planetary Science Conference**, The Woodlands, TX, USA, [#2770](#)

[12] Cousin, A., **Dehouck, E.**, Forni, O., David, G., Berger, G., Meslin, P.-Y., Lasue, J., Ollila, A., Rapin, W., Maurice, S., Gasnault, O., Wiens, R. (2020), Potassium enrichments and minor element abundances measured by ChemCam at Glen Torridon, Gale crater, Mars, *51st*

[11] Goetz, W., Wiens, R. C., **Dehouck, E.**, Gasnault, O., Lasue, J., Payré, V., Frydenvang, J., Clark, B., Clegg, S. M., Forni, O., Meslin, P.-Y., Maurice, S., Newsom, H., and the MSL science team (2020), Tracking of copper by the ChemCam instrument in Gale crater, Mars: Elevated abundances in Glen Torridon, *51st Lunar and Planetary Science Conference**, The Woodlands, TX, USA, [#2974](#)

[10] Smith, R. J., McLennan, S. M., **Dehouck, E.**, Horgan, B., Jacob, S., Mangold, N., Rivera-Hernandez, F., Siebach, K., Sun, V. (2020), Exploring silica diagenesis in Gale crater, Mars using the chemostratigraphy of X-ray amorphous materials, *51st Lunar and Planetary Science Conference**, The Woodlands, TX, USA, [#2708](#)

[9] Gasda, P. J., Das, D., Nellessen, M., **Dehouck, E.**, Rapin, W., Meslin, P.-Y., Newsom, H., Baker, A., Hoffman, M., Ganter, G., Fey, D., Kronyak, R., Frydenvang, J., Wiens, R. C., Clegg, S., Maurice, S., Gasnault, O. (2020), Veins in Glen Torridon, Gale crater, Mars: Exploring the potential transition into the sulfate-bearing unit, *51st Lunar and Planetary Science Conference**, The Woodlands, TX, USA, [#1641](#)

[8] David, G., Cousin, A., Forni, O., Meslin, P.-Y., **Dehouck, E.**, Berger, G., Mangold, N., Rapin, W., Gasnault, O., Wiens, R. C., Maurice, S. (2020), Chemical characterization of clay minerals with ChemCam at the Marimba drill location, Gale crater, Mars, *51st Lunar and Planetary Science Conference**, The Woodlands, TX, USA, [#1849](#)

[7] Siebach, K. L., Achilles, C. N., Smith, R. J., McLennan, S. M., **Dehouck, E.** (2020), Using Curiosity drill sites to test the chemical index of alteration, *51st Lunar and Planetary Science Conference**, The Woodlands, TX, USA, [#3028](#)

[6] Fox, V. K., Bennett, K. A., Bryk, A., Arvidson, R., Bristow, T., **Dehouck, E.**, Dietrich, B., Ehlmann, B., Fedo, C., Mangold, N., O'Connell, C., Rampe, L., Rivera-Hernandez, F., Thompson, L., Wiens, R. C., and the MSL science team (2020), One year in Glen Torridon: key results from the Mars Science Laboratory Curiosity rover exploration of clay-bearing units, *51st Lunar and Planetary Science Conference**, The Woodlands, TX, USA, [#2833](#)

[5] Forni, O., Meslin, P.-Y., Drouet, C., Cousin, A., David, G., Mangold, N., **Dehouck, E.**, Rampe, E. B., Gasnault, O., Nachon, M., Newsom, H., Blaney, D. L., Clegg, S. M., Ollila, A. M., Lasue, J., Maurice, S., Wiens, R. C. (2020), Apatites in Gale crater, *51st Lunar and Planetary Science Conference**, The Woodlands, TX, USA, [#2192](#)

[4] Mandon, L., Parkes Bowen, A., Quantin-Nataf, C., Bridges, J. C., Carter, J., Pan, L., Beck, P., **Dehouck, E.**, Volat, M., Thomas, N., Cremonese, G., Tornabene, L. L. (2020), High-resolution characterization of the clay-bearing unit at Oxia Planum, the ExoMars 2020 landing site, *51st Lunar and Planetary Science Conference**, The Woodlands, TX, USA, [#1114](#)

[3] Lasue, J., Maurice, S., Virmontois, C., Bernardi, P., Doressoundiram, A., Carter, J., Chevrel, S., **Dehouck, E.**, Douté, S., Flahaut, J., Le Mouélic, S., Pinet, P., Quantin-Nataf, C. (2020), The Regolith Moon ExplORer (ROME) camera science case and implementation, *51st Lunar and Planetary Science Conference**, The Woodlands, TX, USA, [#1819](#)

[2] Salvatore, M. R., Fraeman, A. A., Gasda, P. J., Rampe, E. B., Gabriel, T. S. J., Gasnault, O., David, G., Edgar, L. A., **Dehouck, E.** (2020), Lessons learned when reconciling orbital and in situ exploration of Vera Rubin ridge, Gale crater, Mars, *51st Lunar and Planetary Science Conference**, The Woodlands, TX, USA, [#2714](#)

[1] Wiens, R. C., Mangold, N., Forni, O., Anderson, R. B., Gasnault, O., Bryk, A., Dietrich, W. E., Johnson, J. R., **Dehouck, E.**, Le Deit, L., Frydenvang, J., Bedford, C., Maurice, S., and the ChemCam and MSL science teams (2020), First Gale Western Butte capping-unit compositions, and relationships to earlier units along Curiosity's traverse, *51st Lunar and Planetary Science Conference**, The Woodlands, TX, USA, [#2396](#)

*Conférence annulée en raison de l'épidémie de Covid-19

- 2019 (23) -

[23] **[Oral] Dehouck, E.**, Cousin, A., Mangold, N., Frydenvang, J., Lasue, J., Meslin, P.-Y., Gasnault, O., Fox, V. K., Bennett, K. A., Clegg, S. M., Gasda, P. J., Maurice, S., Wiens, R. C. (2019), Geochemical composition and alteration history of the clay-bearing sedimentary rocks of Glen Torridon (Gale crater, Mars) analyzed by the ChemCam instrument, *AGU Fall Meeting*, San Francisco, CA, USA

[22] Smith, R., McLennan, S. M., **Dehouck, E.**, Sun, V. Z., Mangold, N. (2019), Exploring a diagenetic origin for X-ray amorphous material in Gale crater sedimentary rocks, *AGU Fall Meeting*, San Francisco, CA, USA

[21] Bennett, K. A., Fox, V. K., Bryk, A. B., Fedo, C., Vasavada, A., **Dehouck, E.**, Thompson, L. M., O'Connell-Cooper, C., Bristow, T., Millan, M., McAdam, A., Wiens, R. C., House, C. H., Mangold, N. (2019), Results from the Curiosity rover's traverse through the clay-bearing Glen Torridon region in Gale crater, *AGU Fall Meeting*, San Francisco, CA, USA

[20] Fox, V., Bennett, K., Stack, K. M., **Dehouck, E.**, Thompson, L. M., Rampe, E. B., Hardgrove, C. J., Fedo, C. M., Ehlmann, B. L., Grotzinger, J. P., Gupta, S., Arvidson, R., Czarnecki, S. M. (2019), Curiosity exploration of the clay-bearing Glen Torridon region on Mt Sharp, Gale crater, Mars, *GSA Annual Meeting*, Phoenix, AZ, USA

[19] **[Oral] Dehouck, E.**, Cousin, A., Mangold, N., Frydenvang, J., Lasue, J., Meslin, P.-Y., Gasnault, O., Fox, V. K., Bennett, K. A., Maurice, S., Wiens, R. C. (2019), Geochemistry of the clay-bearing sedimentary rocks of Glen Torridon, Gale crater, Mars, *EPSC-DPS Joint Meeting*, Geneva, Switzerland, #979

[18] Lasue, J., **Dehouck, E.**, Johnson, J. R., Beck, P., David, G., Freissinet, C., Graham, H. V., Knudson, C. A., Krämer Ruggiu, L., Wellington, D. F., Bell, J. F., Cannon, K. M., Forni, O., Gasnault, O., Le Mouélic, S., Mangold, N., Meslin, P.-Y., Maurice, S., Wiens, R. C. (2019), Cumberland and Rocknest analogues near-infrared and LIBS measurements compared to MSL, *EPSC-DPS Joint Meeting*, Geneva, Switzerland, #1852

[17] Mangold, N., Cousin, A., **Dehouck, E.**, Forni, O., Fraeman, A., Frydenvang, J., Gasnault, O., Johnson, J., Le Deit, L., L'Haridon, J., Le Mouélic, S., Maurice, S., McLennan, S. M., Meslin, P.-Y., Newsom, H. E., Rapin, W., Rivera-Hernandez, F., Wiens, R. C. (2019), Open system alteration at Gale crater, using ChemCam, onboard the Curiosity rover, *EPSC-DPS Joint Meeting*, Geneva, Switzerland, #248

[16] L'Haridon, J., Mangold, N., Wiens, R. C., Cousin, A., David, G., Johnson, J. R., Fraeman, A., Rapin, W., Frydenvang, J., **Dehouck, E.**, Schwenzer, S., Gasda, P., Lanza, N., Bridges, J., Horgan, B., House, C., Meslin, P.-Y., Salvatore, M., Gasnault, O., Maurice, S. (2019), Diagenetic processes in sedimentary rocks at Gale crater, Mars, using Chemcam, Curiosity rover, *EPSC-DPS Joint Meeting*, Geneva, Switzerland, #251

[15] Mandon, L., Parkes Bowen, A., Quantin-Nataf, C., Bridges, J., Carter, J., Pan, L., **Dehouck, E.**, Beck, P., Volat, M. (2019), Investigating the clay-bearing unit of Oxia Planum, the landing site of the ExoMars 2020 mission, *19th EANA Astrobiology conference*, Orléans, France, #282483

[14] **Dehouck, E.**, Cousin, A., Mangold, N., Frydenvang, J., Lasue, J., Meslin, P.-Y., Gasnault, O., Fox, V. K., Bennett, K. A., Maurice, S., Wiens, R. C. (2019), MSL/ChemCam at Glen Torridon : geochemistry of the orbitally-identified clay-bearing unit of Gale crater, *Ninth International Conference on Mars*, Pasadena, CA, USA, [#6125 \[e-poster\]](#)

[13] Smith, R. J., **Dehouck, E.**, McLennan, S. M. (2019), Amorphous component compositional ranges in Gale crater, Mars, *Ninth International Conference on Mars*, Pasadena, CA, USA, [#6324](#)

[12] Mangold, N., Cousin, A., **Dehouck, E.**, Forni, O., Fraeman, A., Frydenvang, J.,

Gasnault, O., Johnson, J., Le Deit, L., L'Haridon, J., Le Mouélic, S., Maurice, S., McLennan, S., Meslin, P.-Y., Newsom, H. E., Rapin, W., Rivera-Hernandez F., Wiens, R. C. (2019), Chemostratigraphy of fluvial and lacustrine sedimentary rocks at Gale crater using ChemCam onboard the Curiosity rover, *Ninth International Conference on Mars*, Pasadena, CA, USA, [#6078](#)

[11] Gasnault, O., Pinet, P., Wiens, R. C., **Dehouck, E.**, Gasda, P., Forni, O., Lasue, J., Stack, K., Maurice, S., Fabre, C. (2019), Targeting and classifying drill Holes on Mars with ChemCam, *Ninth International Conference on Mars*, Pasadena, CA, USA, [#6199](#)

[10] Fox, V. K., Bennett, K. A., Arvidson, R. E., Ehlmann, B. L., Stack, K., **Dehouck, E.**, Grotzinger, J. P., Bristow, T., Salvatore, M., Catalano, J. (2019), Martian clay minerals from orbit to the surface: MSL and MER rover investigations of CRISM smectite detections, *Ninth International Conference on Mars*, Pasadena, CA, USA, [#6372](#)

[9] David, G., Cousin, A., Forni, O., Meslin, P.-Y., Mangold, N., L'Haridon, J., **Dehouck, E.**, Lanza, N. L., Fraeman, A. A., Ollila, A. M., Newell, A. R., Gasnault, O., Wiens, R. C., Rapin, W., Maurice, S., Salvatore, M. (2019), Hematite mineral grains observed by ChemCam across the Vera Rubin ridge sedimentary rocks at Gale crater, Mars, *Ninth International Conference on Mars*, Pasadena, CA, USA, [#6238](#)

[8] Lasue, J., Cousin, A., Meslin, P.-Y., Mangold, N., Wiens, R. C., Berger, G., **Dehouck, E.**, Forni, O., Goetz, W., Gasnault, O., Rapin, W., Schroeder, S., Ollila, A., Johnson, J., Le Mouélic, S., Maurice, S., Anderson, R., Blaney, D., Clark, B., Clegg, S. M., D'Uston, C., Fabre, C., Lanza, N., Madsen, M. B., Martin-Torres, J., Melikechi, N., Newsom, H., Sautter, V., Zorzano, M. P. (2019), Martian eolian dust analyzed by ChemCam, *Ninth International Conference on Mars*, Pasadena, CA, USA, [#6093](#)

[7] Quantin-Nataf, C., Carter, J., Mandon, L., Balme, M., Fawdon, P., Davis, J., Thollot, P., **Dehouck, E.**, Pan, L., Volat, M., Millot, C., Breton, S., Loizeau, D., Vago, J. (2019), ExoMars at Oxia Planum, probing the aqueous-related Noachian environments, *Ninth International Conference on Mars*, Pasadena, CA, USA, [#6317](#)

[6] L'Haridon, J., Mangold, N., Wiens, R. C., Cousin, A., David, G., Johnson, J. R., Fraeman, A., Rapin, W., Frydenvang, J., **Dehouck, E.**, Schwenzer, S., Gasda, P., Lanza, N., Bridges, J., Horgan, B., House, C., Meslin, P.-Y., Salvatore, M., Gasnault, O., Maurice, S. (2019), Iron-rich diagenetic features analysed in the Murray formation at Gale crater, Mars, using Chemcam onboard the Curiosity rover, *Ninth International Conference on Mars*, Pasadena, CA, USA, [#6079](#)

[5] **[Oral invité] Dehouck, E.** (2019), Secondary minerals and amorphous phases as tracers of the habitability of Mars, *European Week of Astronomy and Space Science*, Lyon, France

[4] Mangold, N., Cousin, A., **Dehouck, E.**, Forni, O., Fraeman, A., Frydenvang, J., Gasnault, O., Johnson, J., Le Deit, L., L'Haridon, J., Le Mouélic, S., Maurice, S., McLennan, S., Meslin, P.-Y., Newsom, H. E., Rapin, W., Rivera-Hernandez, F., Salvatore, M., Schwenzer, S., Wiens, R. (2019), Chemical composition of aqueous sedimentary rocks at Gale crater, Mars, *EGU General Assembly*, Vienna, Austria, [#3871](#)

[3] Lasue, J., **Dehouck, E.**, Johnson, J. R., Beck, P., Freissinet, C., Graham, H. V., Knudson, C. A., Krämer Ruggiu, L., Wellington, D. F., Bell, J. F., Cannon, K. M., David, G., Forni, O., Gasnault, O., Le Mouélic, S., Mangold, N., Meslin, P.-Y., Maurice, S., Wiens, R.C. (2019), Cumberland and Rocknest analog near-infrared reflectance measurements, *50th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2265](#)

[2] Forni, O., Gasnault, O., Cousin, A., Anderson, R. B., **Dehouck, E.**, David, G., Pinet, P., Fabre, C., Bridges, J. C., Wiens, R. C., Maurice, S., Meslin, P.-Y., Lasue, J., Thomas, N. (2019), Machine learning applied to MSL/ChemCam data, *50th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1404](#)

[1] David, G., Cousin, A., Forni, O., Meslin, P.-Y., Johnson, J. R., L'Haridon, J., Beck, P., Potin, S., **Dehouck, E.**, Ollila, A. M., Fraeman, A., Le Mouélic, S., Mangold, N., Chide, B., Gasnault, O., Wiens, R. C., Maurice, S., Fronton, J.-F., Pinet, P., Salvatore, M., Cloutis, E. A. (2019), Iron oxide mineral grains observed by ChemCam on the Vera Rubin Ridge, at Gale crater, Mars, *50th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1228](#)

- 2018 (14) -

[14] Bennett, K. A., Fox, V. K., Vasavada, A. R., Grotzinger, J., Stack, K., Williams, A., **Dehouck, E.**, Edwards, C., Salvatore, M., and the MSL science team (2018), Investigating the clay-bearing unit in Gale crater with the Curiosity rover, *AGU Fall Meeting*, Washington, D.C., USA

[13] Gaudin, A., **Dehouck, E.**, Grauby, O., Mangold, N. (2018), Formation of clay minerals on Mars: Insights from long-term experimental weathering of olivine, *55th Annual Meeting of the Clay Minerals Society*, University of Illinois at Urbana-Champaign, USA

[12] Mangold, N., Carter, J., Baron, F., **Dehouck, E.**, Gaudin, A., Loizeau, D., Poulet, F. (2018), Importance and diversity of geological settings of aluminum-rich clay minerals on Mars, *55th Annual Meeting of the Clay Minerals Society*, University of Illinois at Urbana-Champaign, USA

[11] Smith, R., Horgan, B., Rampe, E., **Dehouck, E.** (2018), Are amorphous phases on Mars precursors to clay minerals?, *55th Annual Meeting of the Clay Minerals Society*, University of Illinois at Urbana-Champaign, USA

[10] Mangold, N., Cousin, A., **Dehouck, E.**, Forni, O., Fraeman, A., Frydenvang, J., Gasnault, O., Grotzinger, J. P., L'Haridon, J., Johnson, J., Le Deit, L., Maurice, S., McLennan, S. M., Meslin, P.-Y., Newsom, H., Rapin, W., Rivera-Hernandez, F., Salvatore, M., Stein, N., Wiens, R. C. (2018), Overview of the composition of the Gale crater lacustrine sediments from ChemCam onboard Curiosity, *EGU General Assembly*, Vienna, Austria, #6031

[9] **Dehouck, E.**, David, G., Meslin, P.-Y., Cousin, A., Gasnault, O., Forni, O., Maurice, S., Wiens, R. C. (2018), Independent characterization of the amorphous component of Martian soils using ChemCam LIBS data, *49th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1322](#) [\[e-poster\]](#)

[8] David, G., Meslin, P.-Y., **Dehouck, E.**, Berger, G., Cousin, A., Forni, O., Lasue, J., Gasnault, O., Wiens, R. C., Maurice, S., Rapin, W., Fronton, J.-F. (2018), LIBS characterization of martian soil analogs: implications for the ChemCam analyses of aeolian sediments at Gale crater, *49th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2234](#)

[7] Forni O., David, G., Cousin, A., **Dehouck, E.**, Mangold, N., Gasnault, O., Wiens, R. C., Meslin, P.-Y., Maurice, S., Payré, V., Frydenvang, J., Ollila, A. M., Lasue, J., Blaney, D. L. (2018), Phyllosilicate identification through ChemCam elemental correlation, *49th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1410](#)

[6] Smith, R. J., Horgan, B., Rampe, E., **Dehouck, E.** (2018), The composition of amorphous phases in soils and sediments on Earth and Mars, *49th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1779](#)

[5] David, G., Cousin, A., Forni, O., Meslin, P.-Y., **Dehouck, E.**, Frydenvang, J., Fraeman, A., Beck, P., Johnson, J., Wiens, R. C., Gasnault, O., Maurice, S., Lasue, J., L'Haridon, J., Fronton, J.-F. (2018), Laboratory analyses of hematite-rich Martian analogues: implications for ChemCam data at Vera Rubin Ridge, *49th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2079](#)

[4] Quantin-Nataf, C., Thollot, P., Carter, J., Mandon, L., **Dehouck, E.** (2018), The unique

and diverse record of Noachian aqueous activity in Oxia Planum, Mars, *49th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2562](#)

[3] Salvatore, M., Truitt, K., Roszell, K., Lanza, N., Rampe, E., Mangold, N., **Dehouck, E.**, Wiens, R., Clegg, S. (2018), Constraints on the mode and extent of sedimentary rock alteration under hyper-arid and hypo-thermal environments, *49th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1265](#)

[2] Mandon, L., Quantin, C., Tholot, P., Lozac'h, L., Mangold, N., Dromart, G., Beck, P., **Dehouck, E.**, Breton, S., Millot, C. (2018), A post impact volcanism scenario for the formation of the olivine-rich unit in the region of Nili Fossae, Mars, *49th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1473](#)

[1] Meslin, P.-Y., Gasda, P., L'Haridon, J., Forni, O., Lanza, N., Lamm, S., Johnson, J. R., Wiens, R. C., Thompson, L., Rapin, W., Gasnault, O., Cousin, A., Mangold, N., **Dehouck, E.**, Maurice, S., Lasue, J., Frydenvang, J. (2018), Detection of hydrous manganese and iron oxides with variable phosphorus and magnesium contents in the lacustrine sediments of the Murray formation, Gale, Mars, *49th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1447](#)

- 2017 (16) -

[16] Meslin, P.-Y., Cousin, A., **Dehouck, E.**, David, G., Rapin, W., Schröder, S., Forni, O., Gasnault, O., Lasue, J., Williams, A. J., Stein, N., Payré, V., Bridges, N., Ehlmann, B., Johnson, J., Anderson, R., Blaney, D., Thomas, N., Lanza, N., Ollila, A., Frydenvang, J., Newsom, H., Mangold, N., Gasda, P., Pinet, P., Maurice, S., Wiens, R. C. (2017), From Aeolis Palus to the Bagnold Dunes field: Overview of martian soil analyses performed by ChemCam in Gale Crater, *AGU Fall Meeting*, New Orleans, LA, USA

[15] Smith, R. J., Horgan, B., Rampe, E. B., **Dehouck, E.**, Morris, R. V. (2017), The composition of secondary amorphous phases under different environmental conditions, *AGU Fall Meeting*, New Orleans, LA, USA

[14] Hurowitz, J. A., Grotzinger, J. P., Fisher, W. W., McLennan, S. M., Milliken, R. E., Stein, N., Vasavada, A. R., Blake, D. F., **Dehouck E.**, Eigenbrode, J. L., Fairen, A. G., Frydenvang, J., Gellert, R., Grant, J. A., Gupta, S., Herkenhoff, K. E., Ming, D. W., Rampe, E. B., Schmidt, M. E., Siebach, K., Stack-Morgan, K., Sumner, D. Y., Wiens, R. C. (2017), Redox stratification of an ancient lake in Gale crater, Mars, *Fourth International Conference on Early Mars*, Flagstaff, AZ, USA

[13] **Dehouck, E.**, Carter, J., Gasnault, O., Pinet, P., Daydou, Y., Gondet, B., Mangold, N., Johnson, J. R., Arvidson, R., Maurice, S., Wiens, R. C. (2017), Curiosity's traverse through the upper Murray formation (Gale crater): ground truth for orbital detections of Martian clay minerals, *EGU General Assembly*, Vienna, Austria, #14867

[12] Rivera-Hernandez, F., Mangold, N., Sumner, D. Y., Nachon, M., Wiens, R. C., Maurice, S., Forni, O., Frydenvang, J., Newsom, H., **Dehouck, E.**, Payré, V. (2017), Understanding chemical and facies variability in the Murray Formation, Gale crater, from ChemCam data, *EGU General Assembly*, Vienna, Austria, #17380

[11] **Dehouck, E.**, Meslin, P.-Y., Gasnault, O., Cousin, A., Forni, O., Rapin, W., Maurice, S., Wiens, R. C. (2017), Probing crystalline and amorphous phases at Yellowknife Bay, Gale crater, Mars: comparison of ChemCam LIBS data with CheMin XRD results, *48th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2268](#) [e-poster]

[10] Mangold, N., **Dehouck, E.**, Forni, O., Le Deit, L., Rivera-Hernandez, F., Frydenvang, J., Meslin, P.-Y., McLennan, S. M., Salvatore, M., Gasnault, O., Wiens, R. C., Maurice, S. (2017), Aqueous alteration in Mt. Sharp mudstones evidenced by ChemCam, Curiosity, *48th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1894](#)

[9] Thorpe, M. T., Hurowitz, J. A., **Dehouck, E.** (2017), A frigid terrestrial analog for the paleoclimate of Mars, *48th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2599](#)

[8] Smith, R. J., Horgan, B., Rampe, E. B., **Dehouck, E.**, Morris, R. V. (2017), X-ray amorphous phases in terrestrial analog volcanic sediments: implications for amorphous phases in Gale crater, Mars, *48th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2465](#)

[7] Mangold, N., Cousin, A., Meslin, P.-Y., Payré, V., **Dehouck, E.**, Newsom, H. E., Forni, O., Frydenvang, J., Flahaut, J., L'Haridon, J., Gasnault, O., Wiens, R. C., Stein, N., Grotzinger, J. P., Hallet, B., Le Deit, L., Rapin, W., Maurice, S. (2017), ChemCam analysis of aqueous processes on polygonal cracks at Gale crater, Mars, *48th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1908](#)

[6] L'Haridon, J., Mangold, N., Rapin, W., Forni, O., Meslin, P.-Y., **Dehouck, E.**, Nachon, M., Le Deit, L., Gasnault, O., Maurice, S., Wiens, R. C. (2017), Identification and implications of iron detection within calcium sulfate mineralized veins by ChemCam at Gale crater, Mars, *48th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1328](#)

[5] Rapin, W., Chauviré, B., Meslin, P.-Y., Maurice, S., Rondeau, B., Mangold, N., **Dehouck, E.**, Gasnault, O., Cousin, A., Forni, O., Frydenvang, J., Wiens, R. C., Schröder, S. (2017), Water content of opaline silica at Gale crater, *48th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2038](#)

[4] Truitt, K., Roszell, K., Salvatore, M., Lanza, N., Rampe, E., Mangold, N., **Dehouck, E.**, Wiens, R., Clegg, S. (2017), Surficial chemical alteration of Antarctic sedimentary rocks as an analog for modern weathering on Mars, *48th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1243](#)

[3] Flahaut, J., Bishop, J. L., Silvestro, S., Tedesco, D., Daniel, I., Loizeau, D., Quantin, C., **Dehouck, E.** (2017), Hydrothermal alteration on Mars compared to the Italian Solfatara, *48th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2071](#)

[2] Lasue, J., Cousin, A., Meslin, P.-Y., Mangold, N., Wiens, R. C., Forni, O., Gasnault, O., Rapin, W., Schröder, S., Ollila, A., Berger, G., **Dehouck, E.**, Johnson, J., Le Mouélic, S., Maurice, S., Anderson, R., Bridges, N., Clark, B., Clegg, S., D'Uston, C., Fabre, C., Goetz, W., Lanza, N., Madsen, M. B., Martin-Torres, J., Melikechi, N., Mezzacappa, A., Newsom, H., Sautter, V., Zorzano, M. P., and the MSL science team (2017), What ChemCam's first shots tell us about martian dust? *48th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1397](#)

[1] Forni, O., Meslin, P.-Y., L'Haridon, J., Rapin, W., Nachon, M., Newsom, H., Mangold, N., Gasnault, O., Anderson, D. E., Anderson, R. B., Blaney, D. L., Clegg, S. M., Cousin, A., **Dehouck, E.**, Johnson, J. R., Lanza, N. L., Lasue, J., Maurice, S., Wiens, R. C. (2017), Detection of Fluorine-rich Phases, Phosphates and Halite in the Stimson-Murray Units, Gale Crater, Mars, *48th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1838](#)

- 2016 (8) -

[8] **Dehouck, E.**, McLennan, S. M., Sklute, E. C., Dyar, M. D. (2016), Experimental investigation of the stability and fate of ferrihydrite during aqueous events on early Mars, *AGU Fall Meeting*, San Francisco, CA, USA

[7] McLennan, S. M., **Dehouck, E.**, Hurowitz, J. A., Lindsley, D. H., Schoonen, M. A. A., Tosca, N. J., Zhao, Y.-Y. S. (2016), Experimental approaches to understanding surficial processes on Mars: the Stony Brook experience 2000-2016, *AGU Fall Meeting*, San Francisco, CA, USA

[6] Thorpe, M. T., Hurowitz, J. A., **Dehouck, E.** (2016), The investigation of terrestrial

analogs for the paleoclimate of Mars, *AGU Fall Meeting*, San Francisco, CA, USA

[5] Lasue, J., Mangold, N., Cousin, A., Meslin, P.-Y., Wiens, R. C., Gasnault, O., Rapin, W., Schröder, S., Ollila, A., Fabre, C., Berger, G., Le Mouélic, S., **Dehouck, E.**, Forni, O., Maurice, S., Anderson, R., Bridges, N., Clark, B., Clegg, S. M., d'Uston, C., Goetz, W., Johnson, J., Lanza, N., Madsen, M. B., Melikechi, N., Mezzacappa, A., Newsom, H., Sautter, V., Martin-Torres, J., Zorzano, M.P. (2016), ChemCam analysis of Martian fine dust, *DPS-EPSC Joint Meeting*, Pasadena, CA, USA

[4] Cousin, A., Forni, O., Meslin, P.-Y., **Dehouck, E.**, Schröder, S., Gasnault, O., Bridges, N., Ehlmann, B., Maurice, S., Wiens, R. (2016), Chemical diversity among fine-grained soils at Gale (Mars): a chemical transition as the rover is approaching the Bagnold dunes?, *GSA Annual Meeting*, Denver, CO, USA

[3] **Dehouck, E.**, McLennan, S. M., Sklute, E. C., Dyar, M. D. (2016), Stability of 2-line ferrihydrite at Gale crater, Mars: Experimental approach, *47th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2223](#)

[2] Thorpe, M. T., Hurowitz, J. A., **Dehouck, E.** (2016), Source-to-sink mineralogy of basaltic sediment generated in an Icelandic watershed, *47th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2172](#)

[1] Hurowitz, J., Grotzinger, J., Fisher, W., Milliken, R., **Dehouck E.**, Fairen, A., Frydenvang, J., Gupta, S., McLennan, S., Siebach, K., Stack-Morgan, K., Sumner, D., Wiens, R. (2016), Dynamic geochemical conditions recorded by the lakebed mudstones in Gale crater, Mars, *47th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1751](#)

- 2015 (8) -

[8] McLennan, S. M., Cino, C. D., **Dehouck, E.** (2015), Geochemical constraints on the origin of secondary mineral assemblages in sedimentary rocks on Mars, *GSA Annual Meeting*, Baltimore, MD, USA

[7] Mangold, N., **Dehouck, E.**, Poulet, F., Ansan, V., Le Mouélic, S. (2015), Ismenius Cavus: ancient lake deposits and clay minerals surrounded by Amazonian glaciers, *First landing site/exploration zone workshop for human missions to the surface of Mars*, Houston, TX, USA

[6] **[Oral] Dehouck, E.**, Gaudin, A., Chevrier, V., Mangold, N. (2015), Redox conditions and alteration pathways on early Mars, *European Planetary Science Congress*, Nantes, France, [#333](#)

[5] **Dehouck, E.**, McLennan, S. M., and the MSL science team (2015), Evaluating the homogeneity of the X-ray amorphous component along the *Curiosity* rover traverse, *European Planetary Science Congress*, Nantes, France, [#327](#)

[4] **Dehouck, E.**, McLennan, S. M., Meslin, P.-Y., Cousin, A., and the MSL science team (2015), The X-ray amorphous components of the Rocknest soil and Sheepbed mudstone (Gale crater, Mars): minimum abundance, compositional ranges and possible constituents, *46th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1946](#)

[3] **Dehouck, E.**, Gaudin, A., Chevrier, V., Mangold, N. (2015), Influence of redox conditions on the secondary mineralogy of early Mars, *46th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1225](#)

[2] McLennan, S. M., **Dehouck, E.**, Grotzinger, J. P., Hurowitz, J. A., Mangold, N., Siebach, K., and the MSL science team (2015), Geochemical record of open-system chemical weathering at Gale crater and implications for paleoclimates on Mars, *46th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2533](#)

[1] Cino, C. D., **Dehouck, E.**, McLennan, S. M. (2015), Geochemical modeling of aqueous alteration processes within the Burns formation, Meridiani Planum, Mars, *46th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2144](#)

- 2014 (6) -

[6] **Dehouck, E.**, McLennan, S. M., Meslin, P.-Y., Cousin, A., Rampe, E. B., Morris, R. V., Lanza, N. L., Hurowitz, J. Rapin, W., and the MSL science team (2014), Constraints on abundances and compositional ranges of X-ray amorphous components of in soils and rocks at Gale crater from mass balance calculations, *Eighth International Conference on Mars*, Pasadena, CA, USA, [#1224](#)

[5] **Dehouck, E.**, Chevrier, V., Altheide, T. S., Lozano, C. G. (2014), Effects of SO₂ vs sulfides as a source of sulfur on the weathering of forsteritic olivine, *Eighth International Conference on Mars*, Pasadena, CA, USA, [#1293](#)

[4] Meslin, P.-Y., Cousin, A., Rapin, W., **Dehouck, E.**, Lanza, N., Forni, O., Schröder, S., Gasnault, O., Wiens, R., Goetz, W., Nachon, M., Mangold, N., Maurice, S., Pinet, P., Fabre, C., Sautter, V., Anderson, R., Lasue, J., Clegg, S., Ollila, A., Clark, B., Rampe, E. B., Mezzacappa, A., Vaniman, D., Blank, J. (2014), Chemistry of fine-grained particles in the Martian soil, as measured by the ChemCam instrument on Curiosity, *Eighth International Conference on Mars*, Pasadena, CA, USA, [#1363](#)

[3] Rampe, E. B., Morris, R. V., Ruff, S. W., Horgan, B., **Dehouck, E.**, Achilles, C. N., Ming, D. W., Bish, D. L., Chipera, S. J., and the MSL science team (2014), Amorphous phases on the surface of Mars, *Eighth International Conference on Mars*, Pasadena, CA, USA, [#1239](#)

[2] **Dehouck, E.**, McLennan, S. M., Meslin, P.-Y., Cousin, A., Rampe, E. B., Lanza, N. L., Hurowitz, J. Rapin, W., and the MSL science team (2014), Exploring the composition and nature of the X-ray amorphous components of Martian soil and rocks at Gale crater, Mars, *45th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1454](#)

[1] Cousin A., Clegg, S., **Dehouck, E.**, Fabre, C., Forni, O., Gasnault, O., Lanza, N., Lasue, J., Mangold, N., Maurice, S., Meslin, P.-Y., Rapin, W., Sautter, V., Schröder, S., Wiens, R., Yingst, A., and the MSL science team (2014), ChemCam blind targets: a helpful way of analyzing soils and rocks along the traverse, *45th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1278](#)

- 2013 (2) -

[2] **Dehouck, E.**, Gaudin, A., Mangold, N., Lajaunie, L., Dautères, A., Grauby, O., Le Menn, E. (2013), Experimental weathering of olivine: effects of CO₂ and H₂O₂ on secondary phases, *AGU Fall Meeting*, San Francisco, CA, USA

[1] **[Oral] Dehouck, E.**, Gaudin, A., Mangold, N., Lajaunie, L., Dautères, A., Le Menn, E. (2013), Weathering of olivine under CO₂ atmosphere: a Martian perspective, *44th Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2071](#)

- 2012 (8) -

[8] **[Oral] Mangold, N., Dehouck, E.** (2012), Nature and origin of hydrous minerals in sediments on Mars, *GSA Annual Meeting*, Charlotte, NC, USA

[7] **Dehouck, E.**, Gaudin, A., Mangold, N., Lajaunie, L., Le Menn, E. (2012), Experimental alteration of basaltic materials: comparison between terrestrial and simulated early Martian conditions, *Third International Conference on Early Mars*, Incline Village, NV, USA, [#7025](#)

[6] Gaudin, A., **Dehouck, E.**, Mangold, N. (2012), Evidence for weathering on Early Mars from a comparison with terrestrial weathering profiles, *Third International Conference on Early Mars*, Incline Village, NV, USA, [#7024](#)

[5] Chevrier, V., **Dehouck, E.**, Lozano, C. G., Altheide, T. S. (2012), Mineral parageneses

resulting from weathering on Early Mars and the effect of CO₂ vs SO₂ atmospheres, *Third International Conference on Early Mars*, Incline Village, NV, USA, [#7080](#)

[4] Mangold, N., Carter, J., Poulet, F., **Dehouck, E.**, Ansan, V., Loizeau, D. (2012), Late Hesperian hydrothermal alteration at Majuro crater, Mars, *EGU General Assembly*, Vienna, Austria, [#1499](#)

[3] **Dehouck, E.**, Chevrier, V., Gaudin, A., Mangold, N., Mathé, P.-E., Rochette, P. (2012), Experimental weathering of silicates and sulfides in CO₂ atmospheres: Implications for sulfates versus carbonates on Mars, *43rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2621](#)

[2] Mangold, N., Carter, J., Poulet, F., **Dehouck, E.**, Ansan, V., Loizeau, D. (2012), Hydrothermal alteration in a Late Hesperian impact crater on Mars, *43rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1209](#)

[1] Carter, J., Poulet, F., Mangold, N., Ansan, V., **Dehouck, E.**, Bibring, J.-P., Murchie, S. (2012), Composition of alluvial fans and deltas on Mars, *43rd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1978](#)

- 2011 (3) -

[3] **[Oral] Dehouck, E.**, Mangold, N., Le Mouélic, S., Ansan, V., Gaudin, A., Poulet, F. (2011), Phyllosilicate-rich deposits at the bottom of a paleolake in Ismenius Lacus region, Mars, *EPSC-DPS Joint Meeting*, Nantes, France, [#447](#)

[2] **Dehouck, E.**, Chevrier, V., Gaudin, A., Mangold, N., Mathé, P.-E., Rochette, P. (2011), Formation of sulfates from sulfide-rich basalts: implications for acidic environments on Mars, *Exploring Mars Habitability*, Lisbon, Portugal

[1] **Dehouck, E.**, Chevrier, V., Gaudin, A., Mangold, N., Mathé, P.-E., Rochette, P. (2011), Role of sulfide-weathering in the formation of sulfates or carbonates on Mars, *42nd Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1715](#)

- 2010 (3) -

[3] **Dehouck, E.**, Chevrier, V., Gaudin, A., Mangold, N., Mathé, P.-E., Rochette, P. (2010), Sulfates formation by weathering of silicates and sulfides on Mars: experimental approach, *1st International Conference on Mars Sedimentology and Stratigraphy*, El Paso, TX, USA, [#6009](#)

[2] **Dehouck, E.**, Mangold, N., Le Mouélic, S., Ansan, V., Gaudin, A., Poulet, F. (2010), *Ismenius Cavus, Mars: A deep paleolake with phyllosilicate-bearing deposits*, *41st Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#1217](#)

[1] Chevrier, V., **Dehouck, E.**, Gaudin, A., Mangold, N., Mathé, P.-E., Rochette, P. (2010), Experimental verification of the "Burns" hypothesis for the formation of Meridiani Planum sediments through weathering of sulfide-rich deposits, *41st Lunar and Planetary Science Conference*, The Woodlands, TX, USA, [#2440](#)

Communications de congrès nationaux

[8] [Oral] **Dehouck, E.**, Gasnault, O., Cousin, A., Rapin, W., Mangold, N., Beck, P., Fabre, C., Sautter, V., Schröder, S., Langevin, Y., Lanza, N., Wiens, R. (2022), ChemCam/Curiosity : bientôt dix ans sur Mars, *Colloque Quadriennal de Bilan et Prospective du Programme National de Planétologie*, Lyon, France

[7] [Oral] **Dehouck, E.**, Mangold, N., Cousin, A., Gasnault, O., Forni, O., David, G., Lasue, J., Meslin, P.-Y., Rapin, W., Maurice, S. (2021), Géochimie des roches sédimentaires du cratère Gale : implications pour l'altération aqueuse sur Mars, *27^e Réunion des Sciences de la Terre*, Lyon, France

[6] Quantin-Nataf, C., Carter, J., Mandon, L., Thollot, P., **Dehouck, E.**, Volat, M (2021) ExoMars at Oxia Planum, probing the early Martian environments, *27^e Réunion des Sciences de la Terre*, Lyon, France

[5] [Oral] **Dehouck, E.**, Meslin, P.-Y., Cousin, A., Gasnault, O., Forni, O., Rapin, W., Maurice, S., Wiens, R. (2016), Minéralogie des sols et roches sédimentaires dans le cratère Gale (Mars) : comparaison des données LIBS/ChemCam avec les résultats DRX/CheMin, *Journées CNES Jeunes Chercheurs*, Toulouse, France

[4] [Oral] **Dehouck, E.**, Gaudin, A., Mangold, N., Chevrier, V., Lajaunie, L., Dauzères, A., Grauby, O., Le Menn, E. (2014), Altération expérimentale de l'olivine sous CO₂ : implications pour Mars primitive, *Colloque Quadriennal de Bilan et Prospective du Programme National de Planétologie*, Paris, France

[3] **Dehouck, E.**, Chevrier, V., Gaudin, A., Mangold, N., Mathé, P.-E., Rochette, P. (2010), Formation de sulfates par altération de silicates et de sulfures sur Mars : approche expérimentale, *Colloque Quadriennal de Bilan et Prospective du Programme National de Planétologie*, Plouzané, France

[2] **Dehouck, E.**, Mangold, N., Le Mouélic, S., Ansan, V., Gaudin, A., Poulet, F. (2010), Ismenius Cavus, Mars : un paléolac profond avec des dépôts riches en phyllosilicates, *Colloque Quadriennal de Bilan et Prospective du Programme National de Planétologie*, Plouzané, France

[1] Mangold, N., Ansan, V., Bouley, S., **Dehouck, E.**, Masson, Ph. (2010). Apport de l'imagerie visible et stéréoscopique de Mars Express à l'étude des vallées fluviales sur Mars, *Colloque Quadriennal de Bilan et Prospective du Programme National de Planétologie*, Plouzané, France

Séminaires et autres présentations scientifiques

14 oct. 2021	“Des Lyonnais sur la Planète Rouge avec la mission Mars 2020” – Observatoire de Lyon, Université Claude Bernard Lyon 1, France
21 jan. 2021	“Ancient aqueous alteration at Gale crater, Mars: insights from geochemistry” – Department of Earth and Planetary Sciences, American Museum of Natural History, New York, NY, États-Unis – virtuel
17 jan. 2020	“L’exploration du cratère Gale, Mars, par le rover Curiosity” – Laboratoire Chrono-Environnement, Université de Franche-Comté, Besançon, France
16 déc. 2019	“Geochemical composition and alteration history of the clay-bearing sedimentary rocks of Glen Torridon (Gale crater, Mars) analyzed by the ChemCam instrument” – e-Planets scientific meeting – LGL-TPE, Université Claude Bernard Lyon 1, France
19 avril 2019	“Selected results from the Curiosity rover and the ChemCam instrument at Gale crater, Mars” – LGL-TPE, Université Claude Bernard Lyon 1, France
18 jan. 2018	“Recent ChemCam results about Martian soils” – Lyon Planetary Science Day – LGL-TPE, Université Claude Bernard Lyon 1, France
14 fév. 2017	“Composition de la surface de Mars : apports croisés des missions spatiales et des expériences en laboratoire” – LGL-TPE, Université Claude Bernard Lyon 1, France
18 nov. 2016	“Composition des sols et roches du cratère Gale (Mars) : des confirmations et des surprises” – IPAG, Université Grenoble Alpes, France
15 mars 2016	“Argiles, phases amorphes et interactions fluide/roche sur Mars primitive” – IRAP, Université Paul Sabatier, Toulouse, France
30 oct. 2014	“Fe/Mg smectites and amorphous phases: what they tell us about rock/water interactions on Mars” – Department of Geosciences, Stony Brook University, NY, États-Unis
3 avril 2013	“Apports expérimentaux et spectroscopiques à la compréhension des processus d’altération sur Mars primitive” – Laboratoire IC2MP, Université de Poitiers, France
23 nov. 2012	[Soutenance de thèse] “Caractérisation des processus d’altération à la surface de Mars par approche expérimentale et télédétection” – Laboratoire de Planétologie et Géodynamique, Université de Nantes, France
2010-2012 (annuel)	Journée des doctorants du Laboratoire de Planétologie et Géodynamique, Université de Nantes, France

Meetings et workshops

<i>Juin 2023</i>	[Oral] Mars 2020 team meeting + [Oral] SuperCam team meeting – Sorbonne Université, Paris, France
<i>Nov. 2022</i>	[Oral] Projet ANR “Paleosilica” – LPG, Nantes, France
<i>Oct. 2022</i>	Mars Science Laboratory team meeting – Monrovia, CA, États-Unis*
<i>Sept. 2022</i>	[Oral] SuperCam France team meeting – Saint-Lary-Soulan, France
<i>Juin 2022</i>	[Oral] Mars 2020 team meeting – Jet Propulsion Laboratory, La Cañada Flintridge, CA, États-Unis
<i>Fév. 2022</i>	Mars Science Laboratory team meeting – virtuel
<i>Déc. 2021</i>	[Oral] SuperCam team meeting – Stony Brook University, NY, États-Unis
<i>Nov. 2021</i>	[Oral] Projet ANR “Paleosilica” – Station marine d'Endoume, Marseille, France
<i>Oct. 2021</i>	Mars 2020 team meeting – virtuel
<i>Oct. 2021</i>	[Oral] Mars Science Laboratory team meeting – virtuel
<i>Sept. 2021</i>	SuperCam France team meeting – Saint-Lary-Soulan, France
<i>Juin 2021</i>	[Oral] SuperCam team meeting – virtuel
<i>Fév. 2021</i>	Mars 2020 team meeting – virtuel
<i>Jan. 2021</i>	MSR Sample Caching Workshop – virtuel
<i>Jan. 2021</i>	Joint PIXL-SuperCam meeting – virtuel
<i>Oct. 2020</i>	[Oral] Mars Science Laboratory team meeting – virtuel
<i>Oct. 2020</i>	[Oral] ChemCam team meeting – virtuel
<i>Sept. 2020</i>	SuperCam team meeting – virtuel
<i>Oct. 2019</i>	[Oral] Mars Science Laboratory team meeting + [Oral] ChemCam team meeting – Caltech, Pasadena, CA, États-Unis
<i>Juin 2019</i>	[Oral] Projet ANR “Mars Prime” – LPG, Nantes, France
<i>Avril 2019</i>	[Oral] Mars Science Laboratory team meeting + ChemCam team meeting – Goddard Space Flight Center, Greenbelt, MD, États-Unis
<i>Sept. 2018</i>	Mars Science Laboratory team meeting + [Oral] ChemCam team meeting – Caltech, Pasadena, CA, États-Unis
<i>Fév. 2018</i>	Mars Science Laboratory team meeting + ChemCam team meeting – Caltech, Pasadena, CA, États-Unis*
<i>Oct. 2017</i>	[Oral] ChemCam team meeting – IRAP, Toulouse, France
<i>Juil. 2017</i>	Mars Science Laboratory team meeting – Canadian Space Agency, Saint-Hubert, Québec, Canada
<i>Juil. 2017</i>	[Oral] France-China Mars Science meeting – IRAP, Toulouse, France
<i>Jan. 2017</i>	Mars Science Laboratory team meeting + [Oral] ChemCam team meeting –

Caltech, Pasadena, CA, États-Unis

<i>Nov. 2016</i>	SuperCam science team meeting – CNES, Paris, France
<i>Avril 2016</i>	Mars Science Laboratory team meeting + ChemCam team meeting – Caltech, Pasadena, CA, États-Unis
<i>Juin 2015</i>	Mars Science Laboratory team meeting – Muséum National d'Histoire Naturelle, Paris, France
<i>Sept. 2014</i>	[Oral] Mars Science Laboratory team meeting – Caltech, Pasadena, CA, États-Unis
<i>Avr. 2014</i>	Mars Science Laboratory team meeting – Caltech, Pasadena, CA, États-Unis
<i>Oct. 2013</i>	Mars Science Laboratory team meeting – Caltech, Pasadena, CA, États-Unis
<i>Juin 2011</i>	Mars Exploration Program Analysis Group meeting – Lisbonne, Portugal
<i>Nov. 2010</i>	ChemCam science team meeting – LPGN, Nantes, France
<i>Mars 2010</i>	Workshop “Mars III” – Les Houches, France
<i>Sept. 2009</i>	Workshop “Modélisations expérimentales surface/subsurface/atmosphère des planètes” – Mont Saint-Michel, France
<i>2008</i>	OMEGA science team meeting – IAS, Orsay, France

*Participation à distance à un meeting ou workshop organisé en présentiel

Conférences et événements grand public

<i>Avril 2023</i>	“Des Lyonnais sur la Planète Rouge avec la mission Mars 2020” – Lycée François Cevert, Écully (69)
<i>Nov. 2022</i>	“Rencontre avec... un planétologue – Mais que fait le rover Perseverance sur Mars ?” – Festival Mission [2] possible, Bron (69)
<i>Nov. 2022</i>	Participation à la table ronde “De Mars à Titan... et au-delà : jusqu’où irons-nous ?” – Festival Mission [2] possible, Bron (69) – https://youtu.be/L1woTkPs14A
<i>Juin 2022</i>	“Le rover Perseverance livre les premiers secrets du cratère Jezero” – Observatoire de Lyon, Saint-Genis-Laval (69)
<i>Mai 2022</i>	“Des robots sur Mars... et un jour, des astronautes ?” – Collège de Corte (2B)
<i>Avril 2022</i>	“Des Lyonnais sur la Planète Rouge avec la mission Mars 2020” – Lycée François Cevert, Écully (69)
<i>Mars 2022</i>	“La mission Mars 2020 et le retour d’échantillons martiens” – Université Ouverte Lyon 1, Planétarium de Vaulx-en-Velin (69)
<i>Oct. 2021</i>	“Curiosity et Perseverance : deux rovers à la découverte de Mars” – Astro Club Challandais, Challans (85)
<i>Août 2021</i>	“Exploration de Mars : que cherchons-nous sur la Planète Rouge ?” – Centre socioculturel de Saint-Agrève (07)
<i>Mai 2021</i>	“De Curiosity à Perseverance : à la recherche du passé de Mars” – Société Astronomique de Lyon (69) – virtuel
<i>Mai 2021</i>	“Perseverance : les premiers pas robotisés sur Mars” – Pint of Science, Lyon (69) – virtuel
<i>Fév. 2021</i>	“Rouler sur la Planète Rouge : la science martienne in situ” – Université Ouverte Lyon 1 (69) – virtuel
<i>Juil. 2020</i>	Intervention en direct sur la chaîne YouTube de Thomas Appéré pour le lancement du rover Perseverance – https://www.youtube.com/watch?v=NgNiZ-dyvg0
<i>Jan. 2020</i>	“Le programme Apollo sous l’angle de la science” – Université Ouverte Lyon 1, École Nationale Supérieure des Sciences de l’Information et des Bibliothèques, Lyon (69)
<i>Juil. 2019</i>	“Il y a 50 ans, Apollo 11” – Observatoire de Lyon, Saint-Genis-Laval (69)
<i>Nov. 2018</i>	Interview dans l’émission “InSight atterrit sur Mars”, en direct du Centre spatial de Toulouse (31) – https://www.youtube.com/watch?v=XcdUx3BRewI
<i>Nov. 2018</i>	“Les océans cachés des lunes de Jupiter et de Saturne” – Université Ouverte Lyon 1, Planétarium de Vaulx-en-Velin (69)
<i>Oct. 2018</i>	“Curiosity : un robot géologue sur Mars” – 26 ^e Réunion des Sciences de la Terre, Lille (59)
<i>Oct. 2018</i>	“Voyages vers Mars : pourquoi la Planète Rouge pique notre curiosité” – Bibliothèque du 5 ^e Point du Jour, Lyon (69)
<i>Fév. 2018</i>	“Hommes ou robots : qui pour explorer Mars ?” – 9 ^{ème} festival Science et Manga, BU Lyon 1, Villeurbanne (69)

<i>Jan. 2018</i>	“La ruée vers Mars” – Récréasciences, Limoges (87)
<i>Déc. 2017</i>	“Le climat ancien de Mars” – Université Ouverte Lyon 1, Lycée Ampère, Lyon (69)
<i>Sept. 2017</i>	“2020 : la ruée vers Mars” – Wormhout Astronomie, Wormhout (59)
<i>Mai 2017</i>	“Mars, la grande aventure spatiale” – Pint of Science, Toulouse (31)
<i>Juil. 2016</i>	“Le rover Curiosity à la recherche de la vie sur Mars” – 11 ^{ème} Expo-Sciences Européenne / Rencontres Michel Crozon, Toulouse (31)
<i>Oct. 2015</i>	“Le climat ancien de Mars” – La Coupole, Helfaut-Wizernes (62)
<i>Nov. 2012</i>	“L’exploration de Mars par le rover Curiosity” – Terre des Sciences, Angers (49)
<i>Oct. 2012</i>	“Le rover Curiosity sur Mars” – La Coupole, Helfaut-Wizernes (62)