

List of Publications

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Les noms surlignés en couleurs correspondent aux **doctorant(e)s dont j'ai co-dirigé la thèse**, aux **autres doctorant(e)s** et aux **post-doctorant(e)s** avec lequel(le)s j'ai collaboré.

Peer-reviewed Articles

- Letulle, T.**, Gaspard, D., **Daëron, M.**, Arnaud-Godet, F., Vinçon-Laugier, A., Suan, G. & Lécuyer, C. (2023). Multi-proxy assessment of brachiopod shell calcite as a potential archive of seawater temperature and oxygen isotope composition. *Biogeosciences* 20:(7), pp. 1381–1403. doi: [10.5194/bg-20-1381-2023](#).
- Casado, M., Stoltmann, T., Landais, A., Jobert, N., **Daëron, M.**, Prié, F. & Kass, S. (2022). High stability in near-infrared spectroscopy: part 1, adapting clock techniques to optical feedback. *Applied Physics B* 128:(3). doi: [10.1007/s00340-022-07774-2](#). [3 citations].
- Chaillot, J.**, Dasari, S., Fleurbay, H., **Daëron, M.**, Savarino, J. & Kass, S. (2022). High-precision laser spectroscopy of H₂S for simultaneous probing of multiple-sulfur isotopes. *Environmental Science: Advances*. doi: [10.1039/d2va00104g](#).
- Huyghe, D.**, **Daëron, M.**, Rafelis, M. de, Blamart, D., Sébilo, M., Paulet, Y.-M. & Lartaud, F. (2022). Clumped isotopes in modern marine bivalves. *Geochimica et Cosmochimica Acta* 316, pp. 41–58. doi: [10.1016/j.gca.2021.09.019](#). [5 citations].
- Letulle, T.**, Suan, G., **Daëron, M.**, Rogov, M., Lécuyer, C., Vinçon-Laugier, A., Reynard, B., Montagnac, G., Lutikov, O. & Schlögl, J. (2022). Clumped isotope evidence for Early Jurassic extreme polar warmth and high climate sensitivity. *Climate of the Past* 18:(3), pp. 435–448. doi: [10.5194/cp-18-435-2022](#). [3 citations].
- Moulin, A., Benedetti, L., Vidal, L., Hage-Hassan, J., Elias, A., Van der Woerd, J., Schimmelpfennig, I., **Daëron, M.** & Tapponnier, P. (2022). LGM glaciers in the SE Mediterranean? First evidence from glacial landforms and ³⁶Cl dating on Mount Lebanon. *Quaternary Science Reviews* 285, pp. 107502. doi: [10.1016/j.quascirev.2022.107502](#). [1 citations].
- Peral, M., Bassinot, F., **Daëron, M.**, Blamart, D., Bonnin, J., Jorissen, F., Kissel, C., Michel, E., Waelbroeck, C., Rebaubier, H. & Gray, W. R. (2022). On the combination of the planktonic foraminiferal Mg/Ca, clumped (Δ_{47}) and conventional ($\delta^{18}\text{O}$) stable isotope paleothermometers in palaeoceanographic studies. *Geochimica et Cosmochimica Acta* 339, pp. 22–34. doi: [10.1016/j.gca.2022.10.030](#).
- Anderson, N. T., Kelson, J. R., Kele, S., **Daëron, M.**, Bonifacie, M., Horita, J., Mackey, T. J., John, C. M., Kluge, T., Petschnig, P., Jost, A. B., Huntington, K. W., Bernasconi, S. M. & Bergmann, K. D. (2021). A Unified Clumped Isotope Thermometer Calibration (0.5–1,100 °C) Using Carbonate-Based Standardization. *Geophysical Research Letters* 48:(7). doi: [10.1029/2020gl092069](#). [42 citations].
- Bernasconi, S. M., **Daëron, M.**, Bergmann, K. D., Bonifacie, M., Meckler, A. N., Affek, H. P., Anderson, N., Bajnai, D., Barkan, E., Beverly, E., Blamart, D., Burgener, L., Calmels, D., Chaduteau, C., Clog, M., Davidheiser-Kroll, B., Davies, A., Dux, F., Eiler, J. M., Elliot, B., Fetrow, A. C., Fiebig, J., Goldberg, S., Hermoso, M., Huntington, K. W., Hyland, E., Ingalls, M., Jaggi, M., John, C. M., Jost, A. B., Katz, S., Kelson, J., Kluge, T., Kocken, I. J., Laskar, A., Leutert, T. J., Liang, D., Lucarelli, J., Mackey, T. J., Mangenot, X., Meinicke, N., Modestou, S. E., Müller, I. A., Murray, S., Neary, A., Packard, N., Passey, B. H., Pelletier, E., Petersen, S., Piasecki, A., Schauer, A., Snell, K. E., Swart, P. K., Tripathi, A., Upadhyay, D., Vennemann, T., Winkelstern, I., Yarian, D., Yoshida, N., Zhang, N. & Ziegler, M. (2021). InterCarb: A community effort to improve inter-laboratory standardization of the carbonate clumped isotope thermometer using carbonate standards. *Geochemistry, Geophysics, Geosystems* 22:(5). doi: [10.1029/2020GC009588](#). [36 citations].
- Daëron, M.** (2021). Full propagation of analytical uncertainties in Δ_{47} measurements. *Geochemistry, Geophysics, Geosystems* 22:(5). doi: [10.1029/2020gc009592](#). [10 citations].
- Fiebig, J., **Daëron, M.**, Bernecker, M., Guo, W., Schneider, G., Boch, R., Bernasconi, S. M., Jautzy, J. & Dietzel, M. (2021). Calibration of the dual clumped isotope thermometer for carbonates. *Geochimica et Cosmochimica Acta* 312, pp. 235–256. doi: [10.1016/j.gca.2021.07.012](#). [9 citations].
- Labeur, A., Beaudoin, N. E., Lacombe, O., Emmanuel, L., Petracchini, L., **Daëron, M.**, Klimowicz, S. & Callot, J.-P. (2021). Burial-Deformation History of Folded Rocks Unraveled by Fracture Analysis, Stylolite Paleopiezometry and Vein Cement Geochemistry: A Case Study in the Cingoli Anticline (Umbria-Marche, Northern Apennines). *Geosciences* 11:(3), pp. 135. doi: [10.3390/geosciences11030135](#). [7 citations].

- Briard, J., Pucéat, E., Vennin, E., Daëron, M., Chavagnac, V., Jaillet, R., Merle, D. & Rafélis, M. de (2020). Seawater paleotemperature and paleosalinity evolution in neritic environments of the Mediterranean margin: Insights from isotope analysis of bivalve shells. *Palaeogeography, Palaeoclimatology, Palaeoecology* 543, pp. 109582. doi: [10.1016/j.palaeo.2019.109582](https://doi.org/10.1016/j.palaeo.2019.109582). [8 citations].
- Peral, M., Blamart, D., Bassinot, F., Daëron, M., Dewilde, F., Rebaubier, H., Nomade, S., Girone, A., Marino, M., Maiorano, P. & Ciaranfi, N. (2020). Changes in temperature and oxygen isotopic composition of Mediterranean water during the Mid-Pleistocene transition in the Montalbano Jonico section (southern Italy) using the clumped-isotope thermometer. *Palaeogeography, Palaeoclimatology, Palaeoecology* 544, pp. 109603. doi: [10.1016/j.palaeo.2020.109603](https://doi.org/10.1016/j.palaeo.2020.109603). [4 citations].
- Coogan, L. A., Daëron, M. & Gillis, K. M. (2019). Seafloor weathering and the oxygen isotope ratio in seawater: insight from whole-rock ^{18}O and carbonate ^{18}O and Δ_{47} from the Troodos ophiolite. *Earth and Planetary Science Letters* 508, pp. 41–50. doi: [10.1016/j.epsl.2018.12.014](https://doi.org/10.1016/j.epsl.2018.12.014). [18 citations].
- Daëron, M., Drysdale, R. N., Peral, M., Huyghe, D., Blamart, D., Coplen, T. B., Lartaud, F. & Zanchetta, G. (2019). Most Earth-surface calcites precipitate out of isotopic equilibrium. *Nature Communications* 10:(1), pp. 429. doi: [10.1038/s41467-019-08336-5](https://doi.org/10.1038/s41467-019-08336-5). [99 citations].
- Petersen, S. V., Defliese, W. F., Saenger, C., Daëron, M., John, C. M., Huntington, K. W., Kelson, J. R., Bernasconi, S. M., Colman, A. S., Kluge, T., Olack, G. A., Schauer, A. J., Bajnai, D., Bonifacie, M., Breitenbach, S. F. M., Fiebig, J., Fernandez, A. B., Henkes, G. A., Hodell, D., Katz, A., Kele, S., Lohmann, K. C., Passey, B. H., Peral, M., Petrizzo, D. A., Rosenheim, B. E., Tripathi, A., Venturelli, R., Young, E. D., Wacker, U. & Winkelstern, I. Z. (2019). Effects of Improved ^{17}O Correction on Interlaboratory Agreement in Clumped Isotope Calibrations, Estimates of Mineral-Specific Offsets, and Temperature Dependence of Acid Digestion Fractionation. *Geochemistry, Geophysics, Geosystems*. doi: [10.1029/2018gc008127](https://doi.org/10.1029/2018gc008127). [95 citations].
- Kassi, S., Stoltmann, T., Casado, M., Daëron, M. & Campargue, A. (2018). Lamb dip CRDS of highly saturated transitions of water near $1.4\ \mu\text{m}$. *The Journal of Chemical Physics* 148:(5), pp. 054201. doi: [10.1063/1.5010957](https://doi.org/10.1063/1.5010957). [27 citations].
- Le Béon, M., Tseng, Y.-C., Klinger, Y., Elias, A., Kunz, A., Sursock, A., Daëron, M., Tapponnier, P. & Jomaa, R. (2018). High-resolution stratigraphy and multiple luminescence dating techniques to reveal the paleoseismic history of the central Dead Sea fault (Yammouneh fault, Lebanon). *Tectonophysics* 738-739, pp. 1–15. doi: [10.1016/j.tecto.2018.04.009](https://doi.org/10.1016/j.tecto.2018.04.009). [6 citations].
- Peral, M., Daëron, M., Blamart, D., Bassinot, F., Dewilde, F., Smialkowski, N., Isguder, G., Bonnini, J., Jorissen, F., Kissel, C., Michel, E., Vázquez Riveiros, N. & Waelbroeck, C. (2018). Updated calibration of the clumped isotope thermometer in planktonic and benthic foraminifera. *Geochimica et Cosmochimica Acta* 239, pp. 1–16. doi: [10.1016/j.gca.2018.07.016](https://doi.org/10.1016/j.gca.2018.07.016). [47 citations].
- Stoltmann, T., Casado, M., Daëron, M., Landais, A. & Kassi, S. (2017). Direct, Precise Measurements of Isotopologue Abundance Ratios in CO_2 Using Molecular Absorption Spectroscopy: Application to $\Delta^{17}\text{O}$. *Analytical Chemistry* 89:(19), pp. 10129–10132. doi: [10.1021/acs.analchem.7b02853](https://doi.org/10.1021/acs.analchem.7b02853). [17 citations].
- Daëron, M., Blamart, D., Peral, M. & Affek, H. P. (2016). Absolute isotopic abundance ratios and the accuracy of Δ_{47} measurements. *Chemical Geology* 442, pp. 83–96. doi: [10.1016/j.chemgeo.2016.08.014](https://doi.org/10.1016/j.chemgeo.2016.08.014). [168 citations].
- Quade, J., Eiler, J., Daëron, M. & Achyuthan, H. (2013). The clumped isotope geothermometer in soil and paleosol carbonate. *Geochimica et Cosmochimica Acta* 105, pp. 92–107. doi: [10.1016/j.gca.2012.11.031](https://doi.org/10.1016/j.gca.2012.11.031). [132 citations].
- Daëron, M., Guo, W., Eiler, J. M., Genty, D., Blamart, D., Boch, R., Drysdale, R., Maire, R., Wainer, K. & Zanchetta, G. (2011). $^{13}\text{C}^{18}\text{O}$ clumping in speleothems: Observations from natural caves and precipitation experiments. *Geochimica et Cosmochimica Acta* 75:(12), pp. 3303–3317. doi: [10.1016/j.gca.2010.10.032](https://doi.org/10.1016/j.gca.2010.10.032). [135 citations].
- Quade, J., Breecker, D. O., Daëron, M. & Eiler, J. (2011). The paleoaltimetry of Tibet: An isotopic perspective. *American Journal of Science* 311:(2), pp. 77–115. doi: [10.2475/02.2011.01](https://doi.org/10.2475/02.2011.01). [177 citations].
- Wainer, K., Genty, D., Blamart, D., Daëron, M., Bar-Matthews, M., Vonhof, H., Dublyansky, Y., Pons-Branchu, E., Thomas, L., Calsteren, P. van, Quinif, Y. & Caillon, N. (2011). Speleothem record of the last 180 ka in Villars cave (SW France): Investigation of a large $\delta^{18}\text{O}$ shift between MIS6 and MIS5. *Quaternary Science Reviews* 30, pp. 130–146. doi: [10.1016/j.quascirev.2010.07.004](https://doi.org/10.1016/j.quascirev.2010.07.004). [85 citations].
- Carton, H., Singh, S. C., Tapponnier, P., Elias, A., Briaes, A., Sursock, A., Jomaa, R., King, G. C. P., Daëron, M., Jacques, E. & Barrier, L. (2009). Seismic evidence for Neogene and active shortening offshore of Lebanon (Shalimar cruise). *Journal of Geophysical Research* 114:(B7). doi: [10.1029/2007jb005391](https://doi.org/10.1029/2007jb005391). [34 citations].
- Huntington, K. W., Eiler, J. M., Affek, H. P., Guo, W., Bonifacie, M., Yeung, L. Y., Thiagarajan, N., Passey, B., Tripathi, A., Daëron, M. & Came, R. (2009). Methods and limitations of ‘clumped’ CO_2 isotope (Δ_{47}) analysis by gas-source isotope-ratio mass spectrometry. *Journal of Mass Spectrometry* 44, pp. 1318–1329. doi: [10.1002/jms.1614](https://doi.org/10.1002/jms.1614). [309 citations].

Daeron, M., Klinger, Y., Tapponnier, P., Elias, A., Jacques, E. & Sursock, A. (2007). 12,000-Year-Long Record of 10 to 13 Paleoearthquakes on the Yammouneh Fault, Levant Fault System, Lebanon. *Bulletin of the Seismological Society of America* 97:(3), pp. 749–771. doi: [10.1785/0120060106](https://doi.org/10.1785/0120060106). [76 citations].

Daëron, M., Avouac, J.-P. & Charreau, J. (2007). Modeling the shortening history of a fault tip fold using structural and geomorphic records of deformation. *Journal of Geophysical Research* 112:(B3). doi: [10.1029/2006jb004460](https://doi.org/10.1029/2006jb004460). [62 citations].

Elias, A., Tapponnier, P., Singh, S. C., King, G. C. P., Briaïs, A., **Daëron, M.**, Carton, H., Sursock, A., Jacques, E., Jomaa, R. & Klinger, Y. (2007). Active thrusting offshore Mount Lebanon: Source of the tsunamigenic A.D. 551 Beirut-Tripoli earthquake. *Geology* 35:(8), pp. 755. doi: [10.1130/g23631a.1](https://doi.org/10.1130/g23631a.1). [91 citations].

Daëron, M., Klinger, Y., Tapponnier, P., Elias, A., Jacques, E. & Sursock, A. (2005). Sources of the large A.D. 1202 and 1759 Near East earthquakes. *Geology* 33:(7), pp. 529. doi: [10.1130/g21352.1](https://doi.org/10.1130/g21352.1). [59 citations].

Daëron, M., Benedetti, L., Tapponnier, P., Sursock, A. & Finkel, R. C. (2004). Constraints on the post ~25-ka slip rate of the Yammouneh fault (Lebanon) using in situ cosmogenic ³⁶Cl dating of offset limestone-clast fans. *Earth and Planetary Science Letters* 227:(1-2), pp. 105–119. doi: [10.1016/j.epsl.2004.07.014](https://doi.org/10.1016/j.epsl.2004.07.014). [84 citations].

Meetings and Workshops

- Adineh, S., Petrash, D., Závada, P., Heuss-Aßbichler, S., Bruthans, J. & **Daëron, M.** (2023). Synglaciogenic Late Ediacaran Cap carbonate of Hormuz Formation (southern Iran). Goldshmidt Conference.
- Adineh, S., Zavada, P., Heuss-Aßbichler, S., Bruthans, J., **Daëron, M.** & Petrash, D. A. (2023). Carbonate formation and alteration in the salt diapir caprock (Paskhand salt diapir, Southern Iran). European Geosciences Union Meeting. doi: [10.5194/egusphere-egu23-10828](https://doi.org/10.5194/egusphere-egu23-10828).
- Bonifacie, M., Anderson, N., Bergmann, K., Katz, A., Calmels, D., Siebert, J., Horita, J., Bernasconi, S. M., **Daëron, M.**, Fosu, B. R. & Jautzy, J. J (2023). Do we need to have mineral-specific Δ_{47} calibrations and/or acid fractionation factors and/or community standards? Goldshmidt Conference.
- Chaillot, J.**, **Daëron, M.**, Casado, M., Landais, A., **Pesnin, M.** & Kassi, S. (2023). Triple oxygen isotope analyses of carbon dioxide, water and carbonates by VCOF-CRDS technique. European Geosciences Union Meeting. doi: [10.5194/egusphere-egu23-12216](https://doi.org/10.5194/egusphere-egu23-12216).
- Chaillot, J.**, M. Pesnin, M. Daëron and., **Clauzel, T.**, Casado, M., Landais, A. & Kassi, S. (2023). Validating the use of VCOF-CRDS for precise and accurate triple oxygen isotope analyses of CO₂, H₂O and carbonates. Goldshmidt Conference.
- Daëron, M.** (2023). Automated for the PyPL: Using Bare-Metal Python to Build Robust Sample Preparation Lines and Much More. Goldshmidt Conference.
- (2023). Making the Case for Reconciled Δ_{47} Calibrations Using Omnivariant Generalized Least-Squares Regression. European Geosciences Union Meeting. doi: [10.5194/egusphere-egu23-10066](https://doi.org/10.5194/egusphere-egu23-10066).
- (2023). Making the Case for Reconciled Δ_{47} Calibrations Using Omnivariant Generalized Least-Squares Regression. Goldschmidt Conference.
- Mouthereau, F., Larrey, M., Boschetti, L., Beaudoin, N., Brichau, S., Roberts, N., Huyghe, D., **Daëron, M.**, Miegébielle, V. & Calassou, S. (2023). Processes related to the rift-to-collision transition in the eastern Betics as revealed by low-temperature thermochronology on magmatic, U-Pb dating and clumped isotopes on calcite-filled veins. European Geosciences Union Meeting. doi: [10.5194/egusphere-egu23-13467](https://doi.org/10.5194/egusphere-egu23-13467).
- Pesnin, M.**, Thaler, C., **Daëron, M.**, Medjoubi, K., Nomade, S. & Rollion-Bard, C. (2023). Mineralogical, elemental, stable and clumped isotope composition of modern bryozoan skeletons. European Geosciences Union Meeting. doi: [10.5194/egusphere-egu23-9157](https://doi.org/10.5194/egusphere-egu23-9157).
- Pesnin, M.**, Thaler, C., Medjoubi, K., M. Daëron and. S. Nomade & Rollion-Bard, C. (2023). Study of bryozoan mineralogic polymorphisms and isotopic signature: from the individual scale to that of the whole colony. Goldshmidt Conference.
- Yanay, N., Wang, Z., Dettman, D., Quade, J., Huntington, K. W., Schauer, A. J., Nelson, D. D., McManus, J., Thirumalai, K., **Daëron, M.** & Sakai, S. (2022). Rapid measurement of carbonate clumped isotopes using tunable infra-red laser spectroscopy. Goldschmidt Conference.
- Chaillot, J.**, Kassi, S., Casado, M., Landais, A. & **Daëron, M.** (2021). Direct, Precise Measurements of Oxygen-17 Anomalies in CO₂ Using VCOF-CRDS. Goldshmidt Conference.
- Daëron, M.** (2021). Traitement des incertitudes dans les mesures isotopiques par spectroscopie laser. Invited presentation, Journées Laser de la Société Française des Isotopes. Invited presentation.
- Daëron, M.** & Guo, W. (2021). Revisiting Isotopic fractionations Associated with Phosphoric Acid Digestion of Carbonates. Goldshmidt Conference.
- Letulle, T.**, Suan, G., Rogov, M., **Daëron, M.**, Vinçon-Laugier, A., Reynard, B., Montagnac, G. & Lécuyer, C. (2021). Clumped isotope evidence for polar warmth and reduced salinity during the Early Jurassic. European Geosciences Union Meeting. doi: [10.5194/egusphere-egu21-14318](https://doi.org/10.5194/egusphere-egu21-14318).
- Daëron, M.** (2020). How I Learned to Stop Worrying and Embrace Isotopic Disequilibrium in Carbonate Minerals. Invited presentation, American Geophysical Union Fall Meeting.
- Daëron, M.**, Drysdale, R. N., **Peral, M.**, **Huyghe, D.**, Blamart, D., Coogan, L. A., Gillis, K. M., Coplen, T. B., Lartaud, F. & Zanchetta, G. (2019). Growth Rate Matters: Resolvable Δ_{47} Differences Between Fast-Precipitating Bio-Carbonates and Slow-Growing Inorganic Calcites, and Implications for the Interpretation of Clumped Isotopes in Low-Temperature Hydrothermal Carbonates from the Oceanic Crust. Seventh International Clumped Isotope Workshop.

- Coogan, L., **Daëron, M.** & Gillis, K. (2018). Oxygen isotope exchange between the ocean and the upper oceanic crust. European Geosciences Union Meeting. Vol. 20, p. EGU2018-4994. URL: <https://meetingorganizer.copernicus.org/EGU2018/EGU2018-4994.pdf>.
- Daëron, M.**, Blamart, D., **Peral, M.**, Drysdale, R. N., Coplen, T. B., **Huyghe, D.** & Zanchetta, G. (2018). Getting Better All the Time: How Well Do Recent Carbonate Clumped Isotope Calibrations Agree With Each Other? European Geosciences Union Meeting. Vol. 20, p. EGU2018-18186. URL: <https://meetingorganizer.copernicus.org/EGU2018/EGU2018-18186.pdf>.
- Daëron, M.**, Drysdale, R. N., **Peral, M.**, **Huyghe, D.**, Blamart, D., Coplen, T. B., Lartaud, F. & Zanchetta, G. (2018). Most Earth-surface calcites precipitate out of isotopic equilibrium. American Geophysical Union Fall Meeting.
- Huyghe, D.**, **Daëron, M.**, Rafelis, M. de, Blamart, D. & Lartaud, F. (2018). Calibration of the Δ_{47} for modern marine mollusks. European Geosciences Union Meeting. Vol. 20, p. EGU2018-12594-1. URL: <https://meetingorganizer.copernicus.org/EGU2018/EGU2018-12594-1.pdf>.
- Daëron, M.** & Blamart, D. (2016). Uncertainties and standardization in the absolute reference frame. Fifth International Clumped Isotope Workshop. URL: <http://daeron.fr/biblio/Da%C3%ABron-2016-ICIW.pdf>.
- Quade, J., Eiler, J.M. & **Daëron, M.** (2011). Clumped isotopes in soil carbonate. American Geophysical Union Fall Meeting. (PP51B-1833).
- Tapponnier, P., Elias, A., Singh, S., King, G., Briaies, A., **Daëron, M.**, Carton, H., Sursock, A., Jacques, E., Jomaa, R. & Klinger, Y. (2004). Active Thrusting Offshore Mount Lebanon: Source of the Tsunamigenic AD 551 Beirut-Tripoli Earthquake. American Geophysical Union Fall Meeting.