

PUBLICATIONS

Smâil Mostefaoui

- Dartois, Engrand, Brunetto, Duprat, Pino, Quirico, Remusat, Bardin, Briani, **Mostefaoui**, Morinaud, Crane, Szvec, Delauche, Jamme, Sandt, Dumas (2013). UltraCarbonaceous Antarctic micrometeorites, probing the Solar System beyond the nitrogen snow-line. *ICARUS* 224, 1, 243-252
- PIANI1, ROBERT, BEYSSAC, BINET, BOUROT-DENISE, DERENNE, LE GUILLOU, MARROCCHI, **MOSTEFAOUI**, ROUZAUD, THOMEN (2012). Structure, composition, and location of organic matter in the enstatite chondrite Sahara 97096 (EH3). *MAPS* 47, 1, 8-29
- Z. Djouadi, F. Robert, L. Le Sergeant d'Hendecourt, **S. Mostefaoui**, H. Leroux, A.P. Jones, and J. Borg (2011). Hydroxyl radical production and storage in analogues of amorphous interstellar silicates: a possible 'wet' accretion phase for inner telluric planets. *Astron. And Astrophys*, 531, A96, 1-9.
- Westall, Cavalazzi, Lemelle, Marrocchi, Rouzaud, Simionovici, Salomé, **Mostefaoui**, Andrezza, Foucher, Toporski, Jauss, Thiel, Southam, MacLean, Wirick, Hofmann, Meibom, Robert, Défarge (2011). Implications of in situ calcification for photosynthesis in a ~3.3 Ga-old microbial biofilm from the Barberton greenstone belt, South Africa. *EPSL* 310, 468-479.
- Petitat M., Marrocchi Y., McKeegan K. D., **Mostefaoui S.**, Meibom A., Zolensky M. E., and Gounelle M., (2011). ^{53}Mn - ^{53}Cr ages of Kaidun carbonates. *Meteoritics and Planetary Science* **46**, 275.
- Oehler D., Robert F., Walter M. R., Sugitani K., Meibom A., **Mostefaoui S.**, Gibson E. K. (2010). Diversity in the Archean Biosphere: New Insights from NanoSIMS. *Astrobiology* –10, 413-424.
- J. Duprat, E. Dobrică, C. Engrand, J. Aléon, Y. Marrocchi, **S. Mostefaoui**, A. Meibom, H. Leroux, J.-N. Rouzaud, M. Gounelle, F. Robert (2010) Extreme Deuterium Excesses in Ultracarbonaceous Micrometeorites from Central Antarctic Snow. *Science* 328,742.
- Oehler D., Robert F., Walter M. R., Sugitani K., Allwood A., Meibom A., **Mostefaoui S.**, Selo M., Thomen A., Gibson E. K. (2009) "NANOSIMS: Insights to Biogenicity and Synergy of Archean Carbonaceous Structures" *Precambrian Research* – 173, 70-78.
- Remusat L., Robert F., Meibom A., **Mostefaoui S.**, Delpoux O., Binet L., Gourier D. and Derenne S. (2009) "Protoplanetary disk chemistry recorded by D-rich organic radicals" *Astrophysical Journal Letters*, 698, 2087-2092.

- Briani G., Gounelle M, Meibom A., Marrocchi Y., **Mostefaoui S.**, Leroux H., Quirico E., Robert F. (2009) "Ultra-pristine Extra-Terrestrial Material with Unprecedented Nitrogen Isotopic Variation" Proceedings of the National Academy of Sciences, USA PNAS 2009 : 0901546106v1-pnas.0901546106.
- Meibom A; Cuif J-P; Houlbreque F; **Mostefaoui S.**; Dauphin Y.; Meibom K. L.; Dunbar R. (2008) Compositional variations at ultra-structure length scales in coral skeleton. *Geochimica et Cosmochimica Acta*, **72**, iss. 6, p. 1555-1569.
- Meibom A., **Mostefaoui, S.**, Cuif J. P., Dauphin Y., Houlbreque F., Dunbar R. and Constantz B. (2007) Biological forcing controls the chemistry of reef-building coral skeleton. *Geophysical Research.Letter* **34**, pp. L02601.
- Meibom A., Krot A. N., Robert F., **Mostefaoui, S.**, Russell S. Petaev M. I. and Gounell M. (2007) Nitrogen and carbon isotopic composition of the Sun inferred from a high-temperature solar nebular condensate. *The Astrophysical journal* **656**. L33-L36.
- Reynaud, S., Ferrier-Pagès C., Meibom A., **Mostefaoui, S.**, Mortlock R., Fairbanks R., and Allemand D. (2007) Light and temperature effects on Sr/Ca and Mg/Ca ratios in the scleractinian coral *Acropora* sp. *Geochim. Cosmochim. Acta* **71**, pp. 354-362.
- **Brownlee D. and the Stardust Preliminary Examination Team. (2006) Comet 81P/Wild 2 under a microscope. Science 314**, Issue 5806, 1711.
- Sandford S. A. **and the Stardust Preliminary Examination Team. (2006) Organics Captured from Comet 81P/Wild 2 by the Stardust Spacecraft. Science 314**, Issue 5806, 1720.
- Zolensky M. E. **and the Stardust Preliminary Examination Team. (2006) Mineralogy and Petrology of Comet Wild 2 Nucleus Samples. Science 314**, Issue 5806, 1735.
- McKeegan K. D. **and the Stardust Preliminary Examination Team. (2006) Isotopic Compositions of Cometary Matter Returned by Stardust. Science 314**, Issue 5806, 1724.
- Oehler D. Z., Robert F., **Mostefaoui S.**; Meibom A., Selo M., and McKay D. S. (2006) Chemical mapping of Proterozoic organic matter at sub-micron spatial resolution. *Astrobiology Magazine* **6**, issue 6, 838-850.
- **Mostefaoui S.**; Zinner E., Hoppe P., Stadermann F. J., and El Goresy A. (2005) In situ survey of graphite in unequilibrated chondrites: Morphologies, C, N, O, and H isotopic ratios. *Meteoritics and Planetary Science* **40**, 721.
- **Mostefaoui, S.**; Lugmair, G. W.; Hoppe, P. (2005) ^{60}Fe : A Heat Source for Planetary Differentiation from a Nearby Supernova Explosion. *The Astrophysical journal* **625**. Issue 1, 272-277.

- Hellebrand E., Snow J.E., **Mostefaoui S.** and Hoppe P. (2005) Trace element distribution between orthopyroxene and clinopyroxene in peridotites from the Gakkel Ridge: a SIMS and NanoSIMS study. *Contributions to Mineralogy and Petrology* **150**, 486-504.
- Beck P., Gillet Ph., El Goresy A., and **Mostefaoui, S.** (2005) Timescales of shock processes in chondritic and martian meteorites. *Nature* **435**, issue 7045, 1071-1074.
- **Mostefaoui S.**, and Hoppe P. (2004) Discovery of abundant in-situ silicate sand spinel grains from red giant stars in a primitive meteorite. *The Astrophysical Journal* **613**. L149-L152
- **Mostefaoui S.**, Lugmair G. W., Hoppe P. and El Goresy A. (2004) Evidence for life ⁶⁰Fe in meteorites. *New Astronomy Reviews* **48**. 155-159
- Tachibana S., Nagahara H., **Mostefaoui S.**, and Kita N. T. (2003) Correlation between relative ages inferred from ²⁶Al and bulk compositions of ferromagnesian chondrules in least equilibrated ordinary chondrites. *Meteoritics and Planetary Science* **38**, 939-962.
- Kita N. T., **Mostefaoui S.**, Liu Y. Z., Togashi S., and Morishita Y. (2003) Application of high precision SIMS ²⁶Al-²⁶Mg analyses to the early solar system chronology. *Applied Surface Science* **203-204**, pp. 806-809.
- El Goresy, A.; Dubrovinsky, L. S.; Gillet, Ph.; **Mostefaoui, S.**; Graup, G.; Drakopoulos, M.; Simionovici, A. S.; Swamy, V. S.; Masaitis, V. L. (2003) A new natural, super-hard, transparent polymorph of carbon from the Popigai impact crater, Russia. *Comptes Rendus Geoscience* **335**, 889-898.
- **Mostefaoui S.**, El Goresy A. P. Hoppe, Ph. Gillet and U. Ott. (2002) Mode of occurrence, textural settings and nitrogen-isotopic compositions of in-situ diamonds and other carbon phases in the the Bencubbin meteorite. *Earth and Planetary Science Letters* **204**, pp. 89-100.
- **Mostefaoui S.**, Kita N. T., Tachibana S., Nagahara H., Togashi S. and Morishita Y. (2002) The relative formation ages of ferromagnesian chondrules inferred from their initial aluminium-26/aluminium-27 ratios. *Meteoritics & Planetary Science* **37**, 421-438.
- **Mostefaoui S.**, Perron C., Zinner E., and Sagon G. (2000) Metal-associated carbone in primitive chondrites: Structure, isotopic compositions, and origin. *Geochim. Cosmochim. Acta* **64**, pp. 1945-1964.
- **Mostefaoui S.**, Hoppe P., and El Goresy A. (1998) In situ discovery of graphite with interstellar isotopic signatures in a chondrule-free clast in an L3 chondrite. *SCIENCE* **280**, 1418-1420.