

Ocean Science Center

Publications in 2025

Mineral Sciences

McCoy, Timothy J., Russell, S. S., Zega, T. J., Thomas-Keprta, K., Singerling, S. A., Brenker, F. E., Timms, N. E., Rickard, W. D. A., Barnes, J. J., Libourel, G., Ray, Soumya, Corrigan, Catherine M., Haenecour, P., Gainsforth, Z., Dominguez, G., King, A. J., Keller, L. P., Thompson, M. S., Sandford, S. A., Jones, R. H., Yurimoto, H., Righter, K., Eckley, S. A., Bland, P. A., Marcus, M. A. et al. 2025. "An evaporite sequence from ancient brine recorded in Benu samples." *Nature*, 637, (8048) 1072–1077. <https://doi.org/10.1038/s41586-024-08495-6>.

Balestra, Barbara, **Huber, Brian**, Chen, Jonathan, **Farfan, Gabriela A.**, MacLeod, Kenneth G., Rose, Timothy, Paytan, Adina, and Gooding, Timothy. 2025. "Benthic foraminiferal Mg/Ca response across the Aptian-Albian Boundary Interval at DSDP Site 511 (Falkland Plateau)." *Palaeogeography, Palaeoclimatology, Palaeoecology*, 663. <https://doi.org/10.1016/j.palaeo.2025.112769>.

Connolly, Harold C., Lauretta, Dante S., **McCoy, Timothy J.**, Russell, Sara S., Haenecour, Pierre, Polit, Anjani, Barnes, Jessica J., Zega, Thomas J., Yurimoto, Hisayoshi, Kawasaki, Noriyuki, Righter, Kevin, Libourel, Guy, Portail, Marc, Guigoz, Vincent, King, Ashley J., Keller, Lindsay P., Thomas-Keprta, Kathy, Le, Loan, Tu, Valarie, Eckley, Scott A., Corrigan, Catherine M., Gooding, Timothy, Rose, Timothy, Wardell, Rob, Ray, Soumya et al. 2025. "[An overview of the petrography and petrology of particles from aggregate sample from asteroid Benu](#)." *Meteoritics & Planetary Science*, <https://doi.org/10.1111/maps.14335>.

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McCoy, Timothy J. and Zega, Thomas J. 2025. "Composition of asteroid Benu transformed by aqueous alteration." *Nature Geoscience*, <https://doi.org/10.1038/s41561-025-01765-6>.

Perez-Huerta, Alberto, Samajpati, Eshita, and **Farfan, Gabriela A.** 2025. "Revealing enameloid shark chemistry at the nanoscale." *Faraday discussions*, <https://doi.org/10.1039/d5fd00019j>.

Sandford, Scott A., Gainsforth, Zack, Nuevo, Michel, Marcus, Matthew A., Bechtel, Hans A., Ogliore, Ryan C., Jones, Clive, Dominguez, Gerardo, Glavin, Daniel P., Dworkin, Jason P., **McCoy, Timothy J.**, Russell, Sara S., Zega, Thomas J., Connolly, Harold C., and Lauretta, Dante S. 2025. "[Nitrogen- and oxygen-rich organic material indicative of polymerization in pre-](#)

[aqueous cryochemistry on Bennu's parent body.](https://doi.org/10.1038/s41550-025-02694-5)" *Nature Astronomy*, 9, (12) 1803-1811. <https://doi.org/10.1038/s41550-025-02694-5>.

Singerling, S. A., Brenker, F. E., Tkalcec, B., Russell, S. S., Zega, T. J., **McCoy, T. J.**, Connolly, H. C., and Lauretta, D. S. 2025. "[Na,Ca carbonates in OSIRIS-REx samples: Evidence for low-temperature, Na-bearing brines on Bennu's parent body.](https://doi.org/10.1016/j.gca.2025.06.028)" *Geochimica et Cosmochimica Acta*, 404 86-92. <https://doi.org/10.1016/j.gca.2025.06.028>.

Zega, T. J., **McCoy, Timothy J.**, Russell, S. S., Keller, L. P., Gainsforth, Z., Singerling, S. A., Manga, V. R., Harrison, C., Libourel, G., Prince, B. S., Thomas-Keprta, K., King, A., Portail, M., Guigoz, V., Tu, V., Le, L., Thompson, M., Benner, M. C., Kerrison, N. A., Barnes, J. J., Ong, I., Haenecour, P., Chaves, L., Smith, L., Kontogiannis, M. et al. 2025. "[Mineralogical evidence for hydrothermal alteration of Bennu samples.](https://doi.org/10.1038/s41561-025-01741-0)" *Nature Geoscience*, <https://doi.org/10.1038/s41561-025-01741-0>.