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Publications

PUBLICATIONS

- **IMPROVING IONPLUS MICADAS PERFORMANCE WITH RECESSED GRAPHITE *RADIOCARBON***
Broek, T. B., Roberts, M. L.
2024
- **Variable aging and storage of dissolved black carbon in the ocean *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA***
Coppola, A. I., Druffel, E. M., Broek, T. A., Haghypour, N., Eglinton, T. I., McCarthy, M., Walker, B. D.
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- **Dominant heterocyclic composition of dissolved organic nitrogen in the ocean: A new paradigm for cycling and persistence. *Proceedings of the National Academy of Sciences of the United States of America***
Broek, T. A., McCarthy, M. D., Ianiri, H. L., Vaughn, J. S., Mason, H. E., Knapp, A. N.
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- **RADIOCARBON ANALYSIS OF SOIL MICROBIAL BIOMASS VIA DIRECT CHLOROFORM EXTRACTION *RADIOCARBON***
Finstad, K. M., Nuccio, E. E., Grant, K. E., Broek, T. B., Pett-Ridge, J., McFarlane, K. J.
2023
- **Optimization of the LLNL/CAMS gas-accepting ion source and 1 MV compact AMS for natural abundance radiocarbon analysis of CO₂. *Nuclear instruments & methods in physics research. Section B, Beam interactions with materials and atoms***
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- **Bacterial sources and cycling dynamics of amino acids in high and low molecular weight dissolved organic nitrogen in the ocean *MARINE CHEMISTRY***
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- **Conversion of the LLNL/CAMS 1 MV biological AMS system to a semi-automated natural abundance 14C spectrometer: system optimization and performance evaluation. *Nuclear instruments & methods in physics research. Section B, Beam interactions with materials and atoms***
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- **Low Molecular Weight Dissolved Organic Carbon: Aging, Compositional Changes, and Selective Utilization During Global Ocean Circulation *GLOBAL BIOGEOCHEMICAL CYCLES***
Broek, T. B., Walker, B. D., Guilderson, T. P., Vaughn, J. S., Mason, H. E., McCarthy, M. D.
2020; 34 (6)
- **Amino acid enantiomers in old and young dissolved organic matter: Implications for a microbial nitrogen pump *GEOCHIMICA ET COSMOCHIMICA ACTA***
Broek, T. B., Bour, A. B., Ianiri, H. L., Guilderson, T. P., McCarthy, M. D.

2019; 247: 207-219

- **Direct Visualization of Individual Aromatic Compound Structures in Low Molecular Weight Marine Dissolved Organic Carbon** *GEOPHYSICAL RESEARCH LETTERS*
Fatayer, S., Coppola, A. I., Schulz, F., Walker, B. D., Broek, T. A., Meyer, G., Druffel, E. M., McCarthy, M., Gross, L.
2018; 45 (11): 5590-5598
- **Coupled ultrafiltration and solid phase extraction approach for the targeted study of semi-labile high molecular weight and refractory low molecular weight dissolved organic matter** *MARINE CHEMISTRY*
Broek, T. B., Walker, B. D., Guilderson, T. P., McCarthy, M. D.
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- **Radiocarbon Analysis of Individual Amino Acids: Carbon Blank Quantification for a Small-Sample High-Pressure Liquid Chromatography Purification Method.** *Analytical chemistry*
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