

Desiree Lisette Roerdink

Born: 26 February 1985 in Apeldoorn, The Netherlands. Nationality: Dutch

Profile

Stable isotope geochemist with more than ten years experience in analytical geochemistry and proven collaborative skills in interdisciplinary working environments. Experienced with management at levels from student project to research group. Passionate about developing non-traditional isotope systems as tracers for (bio)geochemical processes.

Employment history

Associate Professor in Analytical Geochemistry 2017-now
Department of Earth Science, University of Bergen, Norway

- Analysis of Fe and Cu stable isotopes in hydrothermal fluids and minerals by MC-ICP-MS
- Teaching and management of courses in mineralogy, geobiology and analytical geochemistry
- Leader of work package Hydrothermal reactions at K.G. Jebsen Centre for Deep Sea Research

Associate Professor in Geobiology and Geochemistry (temporary position) 2016-2017
Department of Earth Science, University of Bergen, Norway

- Development of courses in mineralogy and analytical geochemistry
- Method development for Fe and Cu isotope analysis by MC-ICP-MS (Nu Plasma II)

Postdoctoral researcher in Geobiology 2014-2016
Department of Earth Science, University of Bergen, Norway

- Analysis of S and Sr isotopes in Archean barite as tracers of geo-biosphere interactions
- Measurement of microbial sulfate reduction rates in marine sediments using radiotracer ³⁵S

Researcher in Stable isotope geochemistry 2013-2014
Department of Earth Science, University of Bergen, Norway

- Method development for multiple S isotope analysis by MC-ICP-MS (Thermo Neptune)

Visiting scholar (3 months, voluntary position) 2008-2009
Gas geochemistry group, USGS Hawaiian Volcano Observatory, United States

- Measurement of volcanic gas emissions from Kilauea using UV-VIS and FTIR spectroscopy

Education

PhD in Archean geology and sulfur isotope geochemistry (cum laude) 2009-2013
Department of Earth Sciences, Utrecht University, The Netherlands

MSc in Geology (cum laude) 2006-2008
Department of Earth Sciences, Utrecht University, The Netherlands

BSc in Earth Sciences (cum laude) 2003-2006
Department of Earth Sciences, Utrecht University, The Netherlands

Relevant skills and experience

Strong background in analytical geochemistry:

- Isotope analysis by MC-ICP-MS (Si, Fe, Cu, Pb), GC-IRMS (S) and SIMS (S)
- Elemental analysis by ICP-OES, electron microprobe, ion chromatography, spectrophotometry
- Clean lab sample preparation and ion exchange chromatography
- Chromium reduction of sulfides and Thode reduction of sulfates
- $^{35}\text{SO}_4^{2-}$ radiotracer labelling experiments and liquid scintillation counting

Research in interdisciplinary and challenging work environments:

- Geochemical analyses and sediment coring operations during 7 research cruises since 2013
- Mapping and sample collection during 4 field campaigns in South Africa since 2010

Scientific responsible of instruments and laboratories:

- Maintenance and troubleshooting of Nu Plasma II MC-ICP-MS at University of Bergen
- Training and safety responsible for ^{35}S - radiotracer laboratory at University of Bergen

Management and supervision of projects, research teams and teaching activities:

- Interim leader for Geobiology and Geochemistry research group at University of Bergen
- Board member of leader group for K.G. Jebsen Centre for Deep Sea Research
- Supervision of 2 PhD, 6 MSc, 3 BSc and 5 exchange students/interns since 2010
- Lecturer and course responsible for 3 MSc and 2 BSc courses at University of Bergen

Committed to international collaboration and service to profession:

- Member of InterRidge working group on Seafloor Massive Sulfides on Mid Ocean Ridges
- Member of French-Dutch-Norwegian research team on the origin of Archean barite
- Proposal reviewer for Icelandic Research Council
- Reviewer for Nature Geoscience, Earth and Planetary Science Letters, Scientific Reports, etc.
- Session convener at Goldschmidt 2017 and organization of Magellan IODP workshop 2016

Achievements

Publications and presentations

- 12 peer-reviewed papers since 2011, of which 5 as first author (3 currently in preparation)
- 10 presentations at major international meetings since 2010, of which 7 as oral presentation

Grants and awards

- UiB SPIRE funding for international collaboration in ICDP project (2020, €20000)
- Co-applicant proposal K.G. Jebsen Centre for Deep Sea Research (2017, €3.2 million)
- Meltzer fund for attendance Goldschmidt conference 2017 (2016, €2500)
- EU Synthesys fund for visit to Nordsim isotope laboratory Sweden (2010, €5000)
- KNGMG/Shell Escherprize for best MSc thesis in Earth Sciences in The Netherlands (2009)
- Co-author NWO proposal 'Exploring Earth's earliest oceans with silicon' (€271.000)

Languages

Dutch mother tongue, fluent in English, proficient in Norwegian