



Research interests

Elemental and isotope ratio analysis

Fundamental processes in inductively coupled plasma mass spectrometry (ICP-MS) (instrumental isotopic fractionation, interferences, etc.)

Development and application of advanced analytical methods (mainly based on (Laser ablation)-(multi collector) inductively coupled plasma mass spectrometry ((LA)-(MC)-ICP-MS) and thermal ionization mass spectrometry (TIMS)):

Development of methods for the (automated) sample preparation for relative and absolute isotope ratio analysis (Ca, Sr, Pb, Nd)

Development of an optimized double spike calibration strategies for Ca isotope ratio analysis using TIMS

Development of novel protocols to assess traditional heavy stable (Sr, Pb, Nd) and non-traditional (Ca) light stable isotope ratios

Development of a combined chemical imaging approach to evaluate the diagenetic status of (pre)historic bone material (using (MC) LA-ICP-MS and NIR-HIS)

Application of heavy stable isotope ratio analysis to trace human (and animal) migration for anthropological and archaeological research

Application of elemental distribution pattern (accessed via chemical imaging using LA ICP-SFMS) and isotope ratio analysis (using MC-ICP-MS or TIMS) for biomedical research (e.g., biodegradable Mg implants, Ca isotopes as biomonitor for the bone-mineral-balance)

Qualifications

Dr. techn., University of Natural Resources and Life Sciences

Nov 2015 → Jul 2020

MSc , Universität Hamburg/Institut für Produktionsmanagement und -technik

Employment

Chair of General and Analytical Chemistry (120)

Montanuniversitaet Leoben (000)

Leoben

1 Jan 2019 → 18 Feb 2019

Chair of General and Analytical Chemistry (120)

Montanuniversitaet Leoben (000)

Leoben

19 Feb 2019 → 10 Mar 2019

Chair of General and Analytical Chemistry (120)

Montanuniversitaet Leoben (000)

Leoben

11 Mar 2019 → 27 Jun 2019

Chair of General and Analytical Chemistry (120)

Montanuniversitaet Leoben (000)
Leoben
28 Jun 2019 → 15 Jul 2019

Chair of General and Analytical Chemistry (120)

Montanuniversitaet Leoben (000)
Leoben
16 Jul 2019 → 31 Aug 2019

Chair of General and Analytical Chemistry (120)

Montanuniversitaet Leoben (000)
Leoben
2 Oct 2019 → 31 Dec 2019

Chair of General and Analytical Chemistry (120)

Montanuniversitaet Leoben (000)
Leoben
1 Sept 2019 → 1 Oct 2019

Chair of General and Analytical Chemistry (120)

Montanuniversitaet Leoben (000)
Leoben
1 Jan 2020 → 30 Sept 2020

Chair of General and Analytical Chemistry (120)

Montanuniversitaet Leoben (000)
Leoben
1 Oct 2020 → 30 Sept 2021

Chair of General and Analytical Chemistry (120)

Montanuniversitaet Leoben (000)
Leoben
1 Jan 2021 → 30 Sept 2021

Chair of General and Analytical Chemistry (120)

Montanuniversitaet Leoben (000)
Leoben
1 Oct 2021 → 31 Oct 2021

Visiting researcher

University of Calgary
Calgary, Canada
1 Sept 2019 → 1 Sept 2019

Visiting researcher

University of Calgary
Calgary, Canada
1 Mar 2019 → 1 Jun 2019

Lecturer

Biotech Campus Tulln der Fachhochschule Wiener Neustadt
Austria
1 Oct 2018 → present

Teaching assignment

University of Natural Resources and Life Sciences
Wien, Austria
1 Apr 2018 → 1 Dec 2018

Visiting researcher

Institute of Coastal Research
Geesthacht, Germany
1 Apr 2016 → 1 May 2016

Research assistant

BOKU
Tulln, Austria
1 Sept 2015 → 1 Dec 2018

Volunteering research visitor

BOKU
Tulln, Austria
1 Feb 2015 → 1 Aug 2015

Research assistant

Institute of Coastal Research
Geesthacht, Germany
1 Mar 2014 → 1 Jan 2015