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Qualifications

Habilitation, Biochemische Untersuchungen zur Silikatbiogenese bei Diatomeen, University of Regensburg
Award Date: 31 Dec 2001

Biochemistry, PhD, Proteine der Diatomeenzellwand: Primärstrukturen, Eigenschaften und mögliche Rolle bei der Zellwandbiogenese, University of Regensburg
Award Date: 31 Dec 1995

Chemistry, Diplom, University of Regensburg
Award Date: 31 Dec 1991

Employment

Academic Staff

Chair of Biomimetic Materials
Technische Universität Dresden
1 Jan 2013 → present

Member

Clusters of Excellence PoL: Physics of Life
Technische Universität Dresden
1 Nov 2018 → present

Academic Staff

Faculty of Chemistry and Food Chemistry
Technische Universität Dresden
1 Jan 2013 → present

Full Professor

Georgia Institute of Technology
Atlanta, United States of America
1 Jan 2011 → 1 Jan 2012

Junior Professor

Georgia Institute of Technology
Atlanta, United States of America
1 Jan 2005 → 1 Jan 2011

Research Group Leader

University of Regensburg
Regensburg, Germany
1 Jan 2001 → 1 Jan 2004

PostDoc

University of Melbourne
Parkville, Australia
1 Feb 1998 → 1 Aug 1998

PostDoc

University of Regensburg
Regensburg, Germany
1 Jan 1996 → 1 Jan 2001

Research outputs**Diatom adhesive trail proteins acquired by horizontal gene transfer from bacteria serve as primers for marine biofilm formation**

Zackova Suchanova, J., Bilcke, G., Romanowska, B., Fatlawi, A., Pippel, M., Skeffington, A., Schroeder, M., & 4 others Vyverman, W., Vandepoele, K., Kröger, N. & Poulsen, N., Oct 2023, In: *New Phytologist*. 240, 2, p. 770-783 14 p.

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The role of organic matrices in biomineralization

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Computational analysis of the effects of nitrogen source and sin1 knockout on biosilica morphology in the model diatom Thalassiosira pseudonana

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Genetically Programmed Regioselective Immobilization of Enzymes in Biosilica Microparticles

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An intimate view into the silica deposition vesicles of diatoms

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Chitin synthase localization in the diatom Thalassiosira pseudonana

Poulsen, N., Wustmann, M., Kröger, N. & Pée, K-H., 2020, In: *BMC materials*. 2, 10.

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Lachnit, M., Buhmann, M. T., Klemm, J., Kroeger, N. & Poulsen, N., 9 Sept 2019, In: Philosophical Transactions of the Royal Society B: Biological Sciences. 374, 1784, 9 p., 20190196.

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Compartmentalisation of Enzymes for Cascade Reactions through Biomimetic Layer-by-Layer Mineralization

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The Molecular Basis of Nacre Formation

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The Biochemistry of Silica Formation in Diatoms

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