



MICHAEL REINKE

Tech-Enthusiast, Physicist, Art Instructor

PhD in Materials Science

2016, Ecole Polytechnique Fédérale de Lausanne, Switzerland

Graduated Physicist / Diplomphysiker

2011, University of Hamburg, Germany

Core Competencies

Project management, intercultural communication, thin film deposition techniques, industrial up-scaling

Way of Working

Solution-oriented, structured, Getting-Things-Done Mindset

Ask me about

Wet-on-Wet landscape painting alla prima, photography, running

Ask me in

German (my mother tongue)

English (my working language)

French (in case you want to make it a bit more challenging)

Romanian (if you would like to test how well I understand my wife)

PROFESSIONAL

Head of Operations

Münster, Germany
Since 09/2019

BASF Coatings GmbH

New Business Development, Functional Films - Novaga

- build up a new production site for functionalization of PET substrate using thin film deposition technologies such as ALD, CVD wet coating, total volume of invest 15 Mio€
- hold operating responsibility of the production site "Functional Films - Novaga" on the BASF Coatings site in Münster-Hiltrup, Germany
- project lead with 30 active members - of those 10 in direct reporting line

Engineering

& Project Manager

Basel, Switzerland
01/2016 - 09/2019

BASF Schweiz AG

New Business Development

- project lead for industrial scale-up of a novel, worldwide unique technology for functionalization of foils in a roll-2-roll process based on ALD
- product and technology development in a company internal startup

Doctoral Assistant

Thun, Switzerland
11/2011 - 12/2015

Swiss National Laboratories for Materials Science & Technology, Empa

Laboratory for Advanced Material Processing

- investigation of surface kinetics in chemical gas phase deposition processes (CVD and ALD) in a prototype high vacuum CVD (HV-CVD) reactor.
- development of a CMOS compatible thin film deposition process for electro-optical materials on Silicon by HV-CVD

Junior Researcher

Hamburg, Germany
06/2010 - 10/2011

University of Hamburg

Laboratory for Femtosecond X-ray physics

- concept and realization of a source for ultrashort soft X-ray laser pulses

IT Consultant & Docent

Kiel, Germany
09/2005 - 10/2011

Brücke SH gGmbH,

- IT administration and organization for ~100 employees on different sites (setting up the network architecture, purchasing, installing and repairing servers and workstations)
- realization of personalized software solutions to increase work efficiency
- teaching Windows, Word, Excel und usage of the internet

Web developer

Wilster, Germany
01/2002 - 12/2011

Self-employed

- front- and backend development of web projects using HTML, JavaScript, PHP, MySQL
- project acquisition and support

COMPETENCIES

Organization

Project Management

- project management and execution of complex interdisciplinary projects in international environments
- conceptualization and execution of industrial scaling-up processes (planning, selection of partners, technological and organizational de-risking, validation)

Technology

Deposition Technologies

- thin film: ALD, CVD, sputtering, silanization, slot-die coating
- surface treatments
- photolithography and microfabrication
- Etching processes (wet and dry)

Analysis

- thin film: SEM, TEM, EDX, XRD, XPS, AES, FTIR
- permeation measurements
- ellipsometry

Environments

- cleanroom iso class 5
- production and laboratory experiments in chemical industry

Teaching

Activities around transferring knowledge

- 5 years training for Word, Excel, Windows (audience: adolescents / adults in phyco-social rehabilitation as preparation for re-entering working life)
- 4 years lecture assistance "Surface Chemistry (audience: bachelor level microengineering undergraduates)
- 2 year lecture assistance „Analysis I“, „Analysis II“, and „Higher Analysis“ (audience: bachelor level mathematics undergraduates)

Science

Publications, Presentations, Honors during PhD studies

- 11 publications in peer reviewed journals, of those 9 as principal author
- Presentations (oral and poster) during international conferences, 4 honorations as best scientific contribution

IT

Knowledge around software and IT

- Very versatile in web programming (PHP, MySQL, JavaScript, HTML); both back-end and front-end
- Very experiences in Microsoft Windows und Office products
- Experiences in CAD, Mathematica, Origin, Linux

SCIENCE

Publications

Low Temperature Epitaxial Barium Titanate Growth in High Vacuum CVD

Advanced Materials Interfaces, DOI: 10.1002/admi.201700116

Michael Reinke, Yury Kuzminykh, Felix Eltes, ..., Patrik Hoffmann

Microstructure and ferroelectricity of BaTiO₃ thin films on Si for integrated photonics

Kristy J Kormondy, Yuri Popoff, Marilyne Sousa, Felix Eltes, ..., Michael Reinke, ..., Stefan Abel

Nanotechnology, DOI: 10.1088/1361-6528/aa53c2

Surface Reaction Kinetics of Titanium Isopropoxide and Water in Atomic Layer Deposition

Michael Reinke, Yury Kuzminykh, and Patrik Hoffmann

J. Phys. Chem. C, DOI: 10.1021/acs.jpcc.5b10529

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Surface Kinetics of Titanium Isopropoxide in High Vacuum Chemical Vapor Deposition

Michael Reinke, Yury Kuzminykh, and Patrik Hoffmann

J. Phys. Chem. C, DOI: 10.1021/acs.jpcc.5b07177

Combinatorial Characterization of TiO₂ Chemical Vapor Deposition Utilizing Titanium Isopropoxide

Michael Reinke, Evgeniy Ponomarev, Yury Kuzminykh, and Patrik Hoffmann

ACS Combinatorial Science, DOI: 10.1021/acscombsci.5b00040

Combinatorial HV-CVD survey of barium triisopropyl cyclopentadienyl and titanium tetraisopropoxide for the deposition of BaTiO₃: Combinatorial HV-CVD survey for the deposition of BaTiO₃

Michael Reinke, Yury Kuzminykh, and Patrik Hoffmann

Physica Status Solidi (A) Applications and Materials, DOI: 10.1002/pssa.201532326

Selective Growth of Titanium Dioxide by Low Temperature Chemical Vapor Deposition

Michael Reinke, Yury Kuzminykh, and Patrik Hoffmann

ACS Applied Materials & Interfaces, DOI: 10.1021/acsami.5b01561

Low Temperature Chemical Vapor Deposition Using Atomic Layer Deposition Chemistry

Michael Reinke, Yury Kuzminykh, and Patrik Hoffmann

Chemistry of Materials, DOI: 10.1021/cm504216p

Limitations of Patterning Thin Films by Shadow Mask High Vacuum Chemical Vapour Deposition

Michael Reinke, Yury Kuzminykh, and Patrik Hoffmann

Thin Solid Films, DOI: 10.1016/j.tsf.2014.02.088

High vacuum chemical vapour deposition of oxides:: A review of technique development and precursor selection

Yury Kuzminykh, Ali Dabirian, Michael Reinke, and Patrik Hoffmann

Surface and Coatings Technology, DOI: 10.1016/j.surfcoat.2013.06.059

Precursor adsorption efficiency of titanium tetra isopropoxide in the presence of a barium beta-diketonate precursor

Michael Reinke, Yury Kuzminykh, Grazeölla Malandrino and Patrik Hoffmann

Surface and Coatings Technology, DOI: 10.1016/j.surfcoat.2013.06.016