Curriculum Vitae

Prof. Dr. Roland Arno Müller
14.07.1963; Jülich

Professional Career

Since 2016	Honorary Professor; Leipzig University of Applied Sciences (HTWK): Integrated Water Resource management, Faculty of Construction
Since 2013	Head of the Scientific Department “Centre for Environmental- Biotechnology” (UBZ) at the Helmholtz Centre for Environmental Research – UFZ, Leipzig
2010-2012	Speaker of the Centre for Environmental Biotechnology (UBZ)
1996-2010	Responsible for the Technology Transfer department at the UFZ
1997-2002	Speaker of the UFZ Environmental biotechnology research topic
1994-1996	Head of the laboratory for environmental and biotechnology
1991-1993	Researcher in the Bioprocess Engineering department of the Society for Biotechnical Research mbH (GBF; now HGF Center for Infection Research), Braunschweig-Stöckheim

University studies and doctoral degree

1991-1994	Doctoral thesis: Kinetic investigations of the degradation of chlorinated and methylated benzoic acids by *Pseudomonas spec.* in stirred tanks reactors, Bioprocess Engineering department, Society for Biotechnical Research, Braunschweig-Stöckheim
1984-1990	University studies in Microbiology at the Carolo-Wilhelmina Technical University of Braunschweig

Research awards

2018	German Environmental Award: Solving a central water problem in a decentralized manner: German skills form the basis for a new wastewater sector, using the example of Jordan; DBU - The German Federal Environmental Foundation (with Michael Hirschfeld, Mi-Yong Lee, Manfred van Afferden)
2016	UFZ Knowledge & Technology Transfer Prize for "Excellent contributions to the development and implementation of the first intersectoral national framework for effective decentralized wastewater management in Jordan (with Manfred van Afferden and Mi-Yong Lee)
2014	UFZ technology transfer award for the "development and scientific support for the implementation of the vertical filter system for cleaning groundwater contaminated with benzene and MTBE" (with Manfred van Afferden, Khaja Z. Rahman and Peter Mosig)
2014	Finalist: Hugo Junkers Prize for a “vertical filter system for resource-efficient and near-natural groundwater purification”. Research and innovation from Saxony-Anhalt, 2nd place in the “Most innovative basic research project” category (with Manfred van Afferden, Khaja Z. Rahman and Peter Mosig)
2013	Finalist in the Innovation Award Competition for Central Germany: “*Energy/Environment/Solar industry*” competition category. Technology entry: “Process development for remediation of MTBE off-flow and benzene-contaminated groundwaters for the large-scale industrial site at Leuna”

Appointed positions & memberships

Since 2017 Appointments by DWA-German Association for Water, Wastewater and Waste:

- Federal Advisory Committee (member)
- Technical committee for international cooperation in the water sector; BIZ -11, (member)
- Working Group: Decentralized wastewater management for developing and transient countries; KA-AG 11-1, (speaker)
- Working Group: System integration; KA- AG 1-4: NASS), (member)

Since 2014 Deputy Chairman of BDZ e.V. (Training and Demonstration Centre for Decentralized Sewage Treatment), Leipzig

Since 2013 Appointed by the Jordanian Ministry of Water and Irrigation as a member of the interministerial National Implementation Committee for Effective Decentralized Wastewater Management in Jordan – *NICE*

Since 2010 Member of the Jordan/Egypt country forum within the German Water Partnership

Since 2009	Member of the board of BDZ e.V. (Training and Demonstration Centre for Decentralized Sewage Treatment), Leipzig
Since 2008	Member of the Scientific Steering Committee of the SMART joint project – Integrated Water Resources Management in the Lower Jordan Rift Valley: Sustainable Management of Available Water Resources with Innovative Technologies – IWRM Israel, Jordan, Palestine
Since 2006	Speaker of the *International Affairs* working group of BDZ e.V.
2005-2010	Member of the scientific advisory council of the GTZ German Society for Technical Cooperation GmbH (now known as GIZ) within the *Ecological Sanitation* – ECOSAN sectoral project; Eschborn
2005	Temporary staff member of the GTZ in South East Asia/the Philippines within the *Integrated Water Resource Management* sectoral project
2005-2010	Member of the scientific advisory council of SIAB e.V. (Saxon Institute of Applied Biotechnology)
2002-2008	Founding member and project head of BDZ e.V. (Training and Demonstration Centre for Decentralized Sewage Treatment), Leipzig

Research interests (2021: h-index: 21; Citations: 2573)

Integrated water resource management

- BlueGreen water infrastructures for the City of the Future
- Decentralised wastewater treatment and management

Ecological engineering

- Resource-efficient wastewater treatment
- Remediation of contaminated groundwaters and of sediments in bodies of water

Research projects:

Strategically relevant research projects with direct involvement; (a full project list from the department UBZ is listed here: https://www.ufz.de/index.php?de=37066)

2019-2022	Leipziger BlauGrün - Leipziger BlauGrün - Blue-Green district development in Leipzig (BMBF FKZ: 033W110A-K)
2017-2020	Urban Transformation; Feasibility study for the modeling of an integrative urban city planning taking into account the areas of sewage, energy and waste: *Funding* Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit, FKZ 3716 15 333 0
2017-2019	NICE-II: National Implementation Committee for Effective Decentralized Wastewater Management in Jordan: Development and implementation of administrative-regulatory tools using the example of the National

Implementation Committee for Effective Decentralized Wastewater Management in Jordan

2017-2018 Research Green roof UFZ; Antragsnummer: EFRE-100307148

2016-2019 Incover: Innovative Ecotechnologies for Resource Recovery from Wastewater; *Funding Institution:* European Commission, Project Number 689242

2016-2018 SMART-MOVE: Sustainable Management of Available Water Resources with Innovative Technologies - Management of Highly Variable Water Resources in Semi-Arid Regions*Funding Institution:* German Federal Ministry of Research and Education (BMBF), FKZ 02WM1080

2015-2019 Establishment of a "Research, Demonstration and Training Facility for Decentralized Wastewater and Sludge Management" in Oman; *Client:* The Research Council of the Sultanate of Oman

2013-2017 CARBOWERT: Use of hydrothermal carbonization (HTC) for the sustainable treatment and recycling of fractions from the sanitary sector as biochar / sewchar concept *Funding Institution:* Bundesministeriums für Ernährung und Landwirtschaft (BMEL), FKZ: 2815600111

2013 BMBF-CLIENT-China: Managing water resources in urban catchments (initial funding)

2012-2015 European Commission (308502): SWINGS - Safeguarding water resources in India with green and sustainable technologies

2012-2015 BMBF (02WM1212): "Amman implementation office": Formation, conception and moderation of a National Implementation Committee (NICE) for decentralised wastewater scenarios in Jordan

2008-2009 VEOLIA research commission: Investigations of the operating behaviour of small-scale wastewater treatment plants under special operating conditions

2007-2013 BMBF (02WM1080): IWRM Integrated Water Resources Management in the Lower Jordan Rift Valley: SMART – Sustainable management of available water resources with innovative technologies, joint project: IWRM, Israel, Jordan, Palestine

2007-2013 Helmholtz Association of National Research Centres (HGF): Revitalization of Contaminated Land and Groundwater at Megasites - Compartment Transfer; UBZ component project: Development of vertical filter systems for remediation of MTBE off-flow and benzene-contaminated groundwaters

2007-2013 BMBF (02WM1027, -8, -9 / 02WM1165): International Water Research Alliance of Saxony; Management of water resources in hydrologically sensitive regions of the world. Interdisciplinary topic: *Technology development and implementation* with the component projects:
1. Hydrothermal carbonisation (HTC) and Sewchar concept
2. Multisensor system for the detection of pathogenic microorganisms

2007-2011 BMBF (02WM0846): Helmholtz *Dead Sea* joint project: Decentralised wastewater treatment and reuse in arid regions – component project: Optimisation of planted soil filters for wastewater reuse in arid regions that are at risk of salinisation

2006-2013	BMBF (033L003A): Integrated water resource management (IWRM) in Central Asia: Model region of Mongolia (MoMo); Implementation of IWRM elements in the Kharaa river basin
2006-2009	DBU (21118-23): Gardens for clean water; joint Polish-German project: Model-scale wastewater treatment using constructed wetlands in the Eastern Carpathians biosphere reserve – demonstration, training and education regarding the principles of decentralised wastewater management in nature reserves
2006-2009	BMBF: Water vision 2050 – Challenges and potentials for sustainable, export-oriented water management in Germany
2002-2005	European Union: “WasteWaterResource” – Play with Water – Introducing ecological engineering to primary schools to increase interest and understanding of natural science
2001	SMUL: Project head for the “Transfer potentials of environmental biotechnology development projects in Saxony” study for the Ministry for the Environment and Agriculture of the federal state of Saxony
2000-2004	BMBF (02WA0107): Reduction in the bacterial count of wastewaters using constructed wetlands – Development and optimisation of decentralised constructed wetlands for use in developing and industrialised countries (Joint Mexican-German project)
1999-2002	BMBF: Bilateral cooperation in science and technology (2+2 projects): “Hygienization of domestic sewage”, establishment of a joint Mexican-German project