Curriculum vitae of Prof. Dominik Eder, FRSC

1. Personal details:

Birth:	19th June 1977, Salzburg, Austria
Affiliation:	Institute of Materials Chemistry, Vienna University of Technology
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2. Academic career:

09/2003	Dr.rer.nat. in Physical Chemistry ("**summa cum laude**"), University of Innsbruck.
10/2000	Mag. rer. nat. in Chemistry ("**summa cum laude**").
10/1995 – 09/2000	Studies of Chemistry at the University of Innsbruck.

3. Employment:

10/2015 – Present	Full Professor (W3) of Materials Chemistry, Deputy Head Institute of Materials Chemistry, **Technische Universität Wien**.
11/2010 – 09/2015	Professor (W1) of Chemistry and Physics of Materials, Institute of Physical Chemistry, **University of Münster**
10/2009 – 10/2010	Senior Research Associate, Dept. Materials Science & Metallurgy, **University of Cambridge, UK** (Prof. A. K. Cheetham FRS).
10/2006 – 09/2009	APART Advanced Research Fellow (Austrian Academy of Science), Dept. Materials Science & Metallurgy, Dept. Physics, **University of Cambridge, UK**
03/2005 – 09/2006	Postdoc as a Schrödinger Fellow, Dept. Materials Science & Metallurgy, **University of Cambridge, UK** (Advisor: Prof. Alan Windle).

4. Research interest:

- Materials Design: Synthesis and structural/functional characterizations of novel energy materials (e.g. photocatalysts and electrode materials) and micro- and mesoporous materials (zeolites, bioactive glasses), with focus on engineering interfaces through combination of 1D/2D nanomaterials into composites and hybrids (e.g. inorganic-inorganic, nanocarbon-inorganic, nanocarbon-polymer) and on introducing large ordered mesopores (e.g. tailor-made co-blockpolymers). My group has been instrumental in establishing nanocarbon hybrids as a new class of composite materials.

- Fundamental studies: Design of model systems to uncover reaction mechanisms in photocatalysis, adsorption/diffusion kinetics and charge/energy transfer dynamics at solid-solid, solid-liquid and solid-gas interfaces. Methods include spectroscopy (transient PL, CIMPS/EIS, DETPM, IR/RAMAN/DRS, UPS/XPS), WAXS/SAXS, SEM/TEM, BET/BJH, and thermal analysis.

- Applied studies: Performance tests, reactor designs, methodology development for socioeconomically important areas such as energy (e.g. solar-to-fuel conversion, energy storage), environment (e.g. water purification, sensors) and medicine (e.g. tissue engineering, drug delivery).

5. Institutional Responsibilities:

2018 - Representative of Group of Professors at faculty level and in the senate (Vienna)
2016 - Member of Committee for Studies and Member of Faculty Board (Vienna)
2015 - Head of research division Molecular Materials Chemistry (Vienna)
2011 – 2015 Member of Commission for Young Faculty, founding Young Member of "Centre for Soft-Nanoscience", Member of Admission Board for Ms. Students and Member and Supervisor in Int. Graduate School for Chemistry (Münster)

6. Organization of scientific meeting

2018/2019 International Conference on Functional Nanomaterials and Nanodevices, Vienna, Austria in 2018 and Prague, Czech Republic in 2019.
2016 17th Int. Conference on the Science and Application of Nanotubes and Low-dimensional Materials, (NT17) and 7th Symposium on Carbon Nanomaterials Biology, Medicine & Toxicology, Vienna, Austria.
2015 1st Workshop on nanomaterials for light harvesting technologies, Madrid, Spain.

7. Membership of scientific societies

- Gesellschaft Österreichischer Chemiker (GOECH, Austria) since 2000.
- Gesellschaft Deutscher Chemiker (GDCh, Germany) since 2001.
- Royal Society of Chemistry (RSC, UK) since 2006**.**

Description of previous research achievements

1. 10 Most important academic publications:

- "How to Evaluate and Manipulate Charge Transfer and Photocatalytic Response at Hybrid Nanocarbon-Metal Oxide Interfaces". **Adv. Func. Mater.**, 28, 9 (2018). DOI: 10.1002/adfm.201704730.
- "Ordered Mesoporous TiO_2 Gyroids: Effects of Pore Architecture and Nb-Doping on Photocatalytic Hydrogen Evolution under UV and Visible Irradiation". **Adv. Energy Mater.,** 8, 11 (2018). DOI: 10.1002/aenm.201802566.
- "Early-Stage Deactivation of Platinum-Loaded TiO_2 Using In Situ Photodeposition during Photocatalytic Hydrogen Evolution". **ACS Catal.,** 7, 4668-4675 (2017). DOI: 10.1021/acscatal.7b00845.
- **"**Oxygen vacancies and interfaces enhancing photocatalytic hydrogen production in mesoporous CNT/TiO_2 hybrids". **Appl. Catal. B: Environ.,** 179, 574-582, (2015). DOI: 10.1016/j.apcatb.2015.05.052.
- "Application and Future Challenges of Functional Nanocarbon Hybrids". **Adv. Mater.,** 26, 2295-2318 (2014). DOI: 10.1002/adma.201305254.
- "Interface engineering in nanocarbon-Ta_2O_5 hybrid photocatalysts". **Energy & Environ. Sci.,** 7, 791-796 (2014), DOI: 10.1039/c3ee42558d.
- "Hybridizing photoactive zeolites with graphene: a powerful strategy towards superior photocatalytic properties". **Chem. Sci.,** 3, 209-216 (2012). DOI: 10.1039/c1sc00511a.
- "Improved conductivity in dye-sensitised solar cells through block-copolymer confined TiO_2 crystallisation". **Energy & Environ. Sci.,** 4, 225-233 (2011). DOI: 10.1039/c0ee00362j.

- "Carbon Nanotube-Inorganic Hybrids". **Chem. Rev.**, 110, 1348-1385 (2010), DOI: 10.1021/cr800433k.
- "Carbon-inorganic hybrid materials: The carbon-nanotube/TiO_2 interface". **Adv. Mater.,** 20, 1787 (2008), DOI: 10.1002/adma.200702835.

2. Most relevant achievements:

- Elected Fellow of Royal Society of Chemistry (FRSC) (2018)
- Scientific Coordinator, EU FP7-NMP project "CARINHYPH"; PI in DFG, EPSRC projects
- Young Scientist Award, Nano Today (Elsevier) (2009)
- APART Fellowship - Austrian Academy of Science (2006), Schrödinger Fellowship (2004)
- Sosnovsky Medal for best thesis at the University of Innsbruck
- 68 Peer-reviewed articles, > 3200 citations; h-index 30; i-10 index 44 (google scholar) Chem. Rev., 2 Energy Environ. Sci., 3 Adv. Mater., 3 Adv. Funct. Mater., Nano Energy, Adv. Energy Mater, ACS Catal., ACS Nano
- More than 50 invited talks at conferences, university/research institutes and industry, including 12 plenary/keynote lectures, 10 W2/W3 interviews
- Editor of 2 books, 7 book chapters, 1 patent
- Supervision of (finished/current): 1/3 Post-docs, 9/5 PhD students, 21/2 Master students
- Active in Outreach Activities: Be OPEN Science & Society Festival, FWF (2018), Lectures to kids and school students (2012-2014). Cambridge Science Festival (2006-2010).
- Reviewer for Grants and Scholarships for various institutions (ERC, Marie Curie, Humboldt, DFG, FWF, NSF-SEES, ANR, ISF, FNP, EPSRC)