

Dr. Dominic Bresser

Birthday:

Place of birth:

Nationality:

Email:

Researcher unique identifier (ORCID):

Research Interest and Expertise

- Electrochemical energy storage and conversion
- Lithium, sodium, potassium, and polymer batteries
- Battery electrolytes (polymers, hybrids, ionic liquid crystals, alternative solvents and salts, additives)
- Battery electrodes (organic and inorganic), charge storage mechanisms, in situ/operando techniques (lab-scale and synchrotron radiation)
- Materials and composites synthesis, preparation, and characterization
- Sustainable electrode processing (anodes and cathodes)

Education

Since 01/2017	Habilitation in Chemistry , <i>Ulm University (UUlm), Germany</i> (all formal criteria fulfilled, anticipated to be completed by 2023)
2010 – 2014	Ph.D. in Physical Chemistry , <i>Münster University (WWU), Germany</i> (Prof. Dr. Stefano Passerini) Title: “Chances and challenges of “going nano” for lithium-ion anodes” (final grade: <i>summa cum laude</i>)
2010	Patent Consultant , <i>Open University of Hagen, Germany</i>
2003 – 2009	Diploma in Business Chemistry , <i>Münster University (WWU), Germany</i> (Prof. Dr. Jens Leker) Title: “Der Einfluss der Anwendungsnähe auf das Patentierungsverhalten in China und Deutschland”

Research & Professional Experience

Since 2020	Group Leader and Principal Investigator (30 group members) Karlsruhe Institute of Technology / Helmholtz Institute Ulm, Germany
Since 2019	Founding Editor-in-Chief Journal of Power Sources Advances, Elsevier
2016 – 2020	Young Investigator Group Leader (in average, 10-15 group members) Karlsruhe Institute of Technology / Helmholtz Institute Ulm, Germany
2015 – 2016	Postdoctoral Researcher and Marie-Curie-Fellow (Enhanced Eurotalents) CEA – INAC/LITEN, Grenoble, France
2014	Research Associate Karlsruhe Institute of Technology / Helmholtz Institute Ulm, Germany
2010 – 2014	Research Associate and Project Manager Münster University, Germany

Reviewing Activities

- **Funding agencies:** Deutsche Forschungsgemeinschaft (DFG); European Research Council (ERC); Fonds de Recherche du Quebec – Nature et technologies (FRQNT), Canada; Agence Nationale de la Recherche (ANR), France; Fonds de la Recherche Scientifique (FNRS), Belgium; National Science Centre (NCN), Poland; Science Fund of the Republic of Serbia (SFRS), Serbia; National Centre of Science and Technology Evaluation (NCSTE), Kazakhstan; Swiss National Science Foundation (SNSF), Switzerland
- **Foundations:** Alexander von Humboldt (AvH) Foundation and Steinbeis Foundation
- **Ph.D. exams (external):** Deakin Univ., Australia; Univ. of Sheffield, UK; Univ. Jaume I, Spain
- **Universities:** Massachusetts Institute of Technology (MIT), USA; Skoltech Research Center, Russia; University Paris-Saclay, France
- **Awards:** ECS Battery Division Research Award Committee
- **International conferences:** Member of the scientific advisory board at the E-MRS in 2019 and 2020
- **Scientific journals:** >50 international journals from >10 publishers (incl. Nature, Nature Materials, Nature Energy, Nature Nanotechnology, Nature Reviews Chemistry, Nature Communications, Energy & Environmental Science, Materials Horizons, Journal of Materials Chemistry A, Advanced Materials, Advanced Energy Materials, Advanced Functional Materials, Angewandte Chemie, Small, ACS Energy Letters, Chemistry of Materials, ACS Nano, Macromolecules, Materials Today, Energy Storage Materials, Nano Energy, Journal of Power Sources, Electrochimica Acta, Journal of The Electrochemical Society, etc.)

Organization of International Meetings and Conferences

2024	Annual ISE Meeting, Montreal, Canada [ca. 150 participants expected]
2023	243 rd ECS Meeting, Boston, USA [ca. 100 participants expected]
2022	7 th International Conference on Sodium Batteries, Ulm, Germany [ca. 250 participants]
2022	Annual ISE Meeting (online), Xiamen, China [ca. 30 participants]
2021	Annual ISE Meeting, Jeju Island, Korea [ca. 100 participants]
2021	MRS Fall Meeting, Boston, USA [ca. 100 participants]
2020	Annual ISE Meeting (online), Belgrade, Serbia [ca. 150 participants]
2020	ABAA12, Ulm, Germany [ca. 350 participants]

Fellowships, Honors & Recognitions

- **ERC Starting Grant 2022** awarded by the *European Research Council* (see 'Research Grants').
- **Carus Medal 2021** awarded by the *German National Academy of Sciences Leopoldina* and **Carus Award 2022** granted by the *city of Schweinfurt, Germany*.
- **YIN Award 2020** for the best 'YIN Grant' proposal in 2020 (see 'Research Grants').
- **ISE Travel Award for Young Electrochemists** for attending the ISE Annual Meeting 2017, USA.
- **CNRS (FR) & AKB Foundation (GER) Fellowship** for attending **The 66th Lindau Nobel Laureate Meeting**.
- **Marie Curie Fellowship, Enhanced Eurotalents** (EU/CEA; 2015 – 2016); *CEA-INAC/LITEN, Grenoble France*.

Committee Activities & Other Services to the Field

- The Electrochemical Society (ECS) – *Member at Large*
- Young Investigator Network (YIN) at KIT – *Spokesperson for the Public-Relations Committee*
- Admissions Committee "Energy Science and Technology" at UUlM
- Council for Research and Promotion of Young Scientists (CRYS) at KIT
- Bi-weekly HIU seminar – *Coordinator and Organizer*
- Scientific Advisory Board of "CEMAM" at the University Grenoble Alpes, France

- Guest editor for *Electrochimica Acta* (2x; Special Issue for the 71st and 73rd ISE Meeting)
- Guest editor for *MRS Advances* (1x; MRS Fall Meeting 2021)

Memberships

- Center for Electrochemical Energy Storage – Ulm & Karlsruhe (CELEST), Germany – *Founding Member*
- The International Society of Electrochemistry (ISE), Lausanne, Switzerland
- Materials Research Society (MRS), Pittsburgh, PA, USA
- The Electrochemical Society (ECS), Pennington, New Jersey, USA – *Member at Large*
- Wirtschaftschemiker der Universität Münster e.V. (WUM), Münster, Germany – *Founding Member*

References

Prof. Dr. Stefano Passerini, *HIU-KIT, Ulm, Germany*

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Dr. Margret Wohlfahrt-Mehrens, *ZSW, Ulm, Germany*

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Dr. Sandrine Lyonnard, *CEA-INAC, Grenoble, France*

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Prof. Gabriele Giuli, *University of Camerino, Italy*

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Prof. Jean-Yves Sanchez, *Universidad Carlos III de Madrid (uc3m), Spain*

Email: jeasanch@ing.uc3m.es

Prof. Dr. Yang-Kook Sun, *Hanyang University, Seoul, South Korea*

Email: yksun@hanyang.ac.kr; *Phone:* +82 2 2220 0524

Publication Summary

- 145 peer-reviewed journal publications (69 as co-/corresponding author)
- *h*-index: 44 / 48; total citations >8,800 / >10,900 (Scopus / Google Scholar)
- 1 book, 5 book chapters and 5 (non-peer-reviewed) review/perspective articles on electrochemical energy storage
- 23 patents and patent applications (active materials and electrolytes for Li- and Na-based batteries)
- 63 presentations at inter-/national conferences and meetings, incl. 41 invited talks at international conferences (incl. 5 keynote lectures and 3 plenary lecture) and 12 invited seminars

Ulm, October 15th 2023