Batteries & Supercaps

Editorial
doi.org/10.1002/batt.202200550

Chemistry Europe
European Chemical Societies Publishing

www.batteries-supercaps.org

# To the Power of Five

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Last year has seen a further increase in the average temperature of Earth. With the concomitant increase in natural disasters, it is becoming clearer that climate change has to be mitigated; a central question will be how energy is created and stored. Great progress has been made in energy storage, with new electrode chemistries having been established, while finding alternatives to lithium is becoming one of the major challenges. *Batteries & Supercaps* will continue publishing the high value content as it has done the last five years to further the research in energy storage—ranging from artificial intelligence, methods for investigation of electrode processes, and material development and design to aspects of their application.

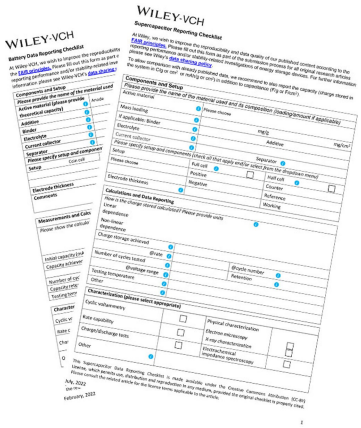
### *5 year anniversary*


Batteries & Supercaps will celebrate its 5th anniversary in 2023! We are commemorating this milestone by gathering recent contributions from our Editorial Advisory Board and Early Career Advisory Board members. Without their continued support *Batteries & Supercaps* would not be what it is today. Watch this space for further updates.

### *What happened 2022*

The range in battery research addressed by our most-accessed manuscripts published last year is very broad, from material development to the end-of-life evaluation of batteries, showing that *Batteries & Supercaps* is well established in the field.

We are delighted that our efforts in supporting the scientific community in the standardization of reported data has been welcomed as more and more scientists use the possibility of fillling in these checklists. This is especially encorouging as this was a joint effort between scientists actively engaged in the community and the editorial team. As the field is growing very quickly, also through the funding provided throughout the world, such a standardization is becoming essential. How important this has become, is supported by the light-hearted "Ten Ways to Fool the Masses When Presenting Battery Research" on the many pitfalls of data reporting in batteries being the most accessed publication in *Batteries & Supercaps* the second year running.




The last years during the pandemic have shown how central conferences are to connect scientists, for forging relationships, developing new ideas and collaborations, and last but not least hearing about the amazing science done. After almost two years of conneting with the scientific was possibly through online events, in-person events are finally coming back, much desired by all participants. *Batteries & Supercaps* has had the pleasure to attend the 4th International Symposium on Magnesium Batteries (MagBatt IV) in Ulm, Germany, and the NordBatt conference in Göteborg, Sweden. At the latter we are delighted that we could honour young scientists by awarding prices for the best poster presentations (Florian Gebert (Uppsala University, Sweden) and Lea Rougette (Chalmers, Sweden; runner up)) and the best design/layout (Amalie Skurtweit, University of Oslo, Norway). Congratulations to all winners for their amazing work!

Together with our highly valued guest editors, *Batteries & Supercaps* has collected manuscripts on various important topics to publish as Special Collections. Aqueous Electrolyte Batteries (Guest Editors: Chunyi Zhi (City University of Hongkong, China), Guihua Yu (The University of Texas at Austin, US) and Isidora Cekic-Laskovic (Forschungszentrum Jülich, Germany)), could solve the long-standing toxicity and safety issues inherent to metal-ion batteries. The Special Collection features contributions on a wide range of topics, ranging from monovalent to multivalent ions and addresses issues when using water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as the solvent (such as low temperature operation and dissolution). Organic materials as electrodes could present a viable alternative to inorganic materials as not only the synthesis but also the mining of the latter has a large carbon footprint. In th Special Collection on Organic Batteries we were honored to work with renowned leaders in the field (Guest Editors: Alexandru Vlad (Université catholique de Louvain, Belgium), Jun Chen (Nankai University, China), and Yan Yao (University of Houston, United States)) on showcasing the most recent developments in the field. The biggest merit of Lithium-Sulfur batteries, on the other hand, is their high theoretical capacity and hence high specific energies. For large-scale batteries, this chemistry has currently commercial prospects. The latest research on the development of lithium-sulfur battery technology, ranging from mechanism understandings to materials developments and characterization techniques is presented in the Special Collection guest edited by Stefan Kaskel (Technische Universität Dresden, Germany), Jia-Qi Huang (Beijing Institute of Technology, China), and Hikari Sakaebe (AIST, Osaka, Japan). We are honored to highlight with Xiang Wu (Shenyang University of Technology, China), Yan Yu (University of Science and Technology of China) and Le Yu (Beijing University of Chemical Technology) as guest editors the most recent efforts, ranging from analysis and fundamental understanding to the rational design of new electrochemical energy storage systems preented at the IV International Symposium on Advanced Energy Storage and Devices at Xi'an, PR China.

### *What is coming up in 2023*

In addition to the 5 year anniversary, we first want to extend a warm welcome to Douglas Ivey (University of Alberta, Canada), who will be joining our board at the beginning of 2023. He has been among our strongest supporters right from the start when *Batteries & Supercaps* was launched.

To tighten bonds with the energy storage communities, *Batteries & Supercaps* are planning to publish several Special Collections:

- A Special collection on the topic of Solid-State Batteries is jointly organized and published with *Advanced Energy Materials*, *ChemSusChem*, *Advanced Energy and Sustainability Research*, and *Energy Technology*. First contributions have already been published.
- The NordBatt conference series invites researchers from industry and academia (amont other stakeholders) in the Nordic and Baltic countries. This series is highlighted by our **NordBatt** Special Collection, for which we are closely collaborating with our board member Patrik Johansson, who organized the meeting in 2022, and the former organizers. Please keep an eye on our dedicated page NordBatt 2022 for contributions.

- Our Sodium Battery (joint *ChemSusChem* and *Energy Technology*) Special Collection highlights the contributions made at the International Conference on Sodium Batteries . The conference chairs, Dr. Margret Wohlfahrt-Mehrens and Prof. Dr. Stefano Passerini retired from their respective positions in Ulm at the end of 2022. We are very grateful for their continued support of *Batteries & Supercaps* throughout the past years and wish them all the best for their future.


- As a publisher of European chemical societies, Chemistry Europe has joint forces with Battery 2030+ to underline the high quality of Battery Research in Europe. The entire portfolio of Chemistry Europe will participate, making this a truly European effort, yet *ChemSusChem*, *Chemistry–A European Journal*, and *Batteries & Supercaps* will be the initial journals participating.

*Batteries & Supercaps* is dedicated to supporting young scientists; to further this support, we will be hosting a Special Collection on Young Researchers in Battery Research.

Finally, the biggest news in the Chemistry Europe portfolio is the launch of Chemistry Europe's new flagship journal: *ChemistryEurope* – the journal. *ChemistryEurope*, conceived as a high-quality, high-impact Gold Open Access journal covering all areas of chemistry, will start in 2023, employing three leading scientists as Editors in chief, all of whom are already strongly connected to the Chemistry Europe family of journals as board members:

- **Luisa De Cola** (Università degli Studi di Milano and Istituto di Ricerche Farmacologiche Mario Negri, Italy) is an expert on luminescent systems and nanoporous structures for biomedical applications and is a member of the Editorial Advisory Board of *ChemPlusChem* and the International Advisory Board of *Angewandte Chemie*.
- **Ken Tanaka** (Tokyo Institute of Technology, Japan) is an expert on organic synthesis and transition metal catalysis and a member of the Editorial Advisory Board of the *European Journal of Organic Chemistry*.
- **Ive Hermans** (University of Wisconsin-Madison, USA) is an expert on sustainable chemistry and catalysis engineering and is a member of the Editorial Advisory Boards of *ChemCatChem* and *ChemSusChem*.

*ChemistryEurope* will feature as the new flagship journal in Chemistry Europe's publishing program, alongside *Chemistry – A European Journal*, the *ChemXChem* family, the open access titles led by *ChemistryOpen*, and their sister journals.

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### *Stay in touch*

The editorial team at *Batteries & Supercaps* is looking forward to working with you in the year 2023. At *Batteries & Supercaps* we are striving to give everyone the best experience that we can offer. This is especially true with regard to our scientific content, in which we are guided by our Editorial Board and Early Career Advisory Board. To further improve our service to the energy storage community, we encourage you to send us your feedback or ideas by contacting us through our journal email address (batteries@Chemistry-Europe.org) or through (Twitter @Batt_Supercaps). We'd be pleased to hear from you!