Welcome to volume 9 of Advanced Science. As always, we’d like to report a few selected highlights from the last year and also look into the future ahead of us.

Already in April 2021, our team had the first opportunity to celebrate: Advanced Science was accepted for coverage in MedLine. This was an important milestone for the journal and will certainly make the journal even more attractive to our ever-growing biomedical audience. In June, the next good news followed: our new impact factor was announced to be 16.806, confirming our ambition for providing a top-quality open access platform for our authors. The paper with the largest contribution to this increase new impact factor was written by Tal Dvir from Tel Aviv University and presented 3D printed cardiac patches. Other outstanding papers and their corresponding authors can be found in Table 1. Amongst those popular contributions, you find topics from water splitting, metasurfaces, and stretchable electronics to tissue engineering (with associated cover art) and cancer immunotherapy.

Congratulations to all authors of those influential papers and thanks a lot for the trust you give to Advanced Science.

Looking back at 2021 we can say that, despite the lingering challenging circumstances the world found itself in, Advanced Science saw, against more skeptical forecasts, a successful year, driven by a strong and engaged community. In 2021 we received ca. 6000 submissions, roughly 20% more than in 2020. The journal hasn’t just continued to be a popular place to publish broad scope research; papers in Advanced Science are also being noticed and read more, with a steep increase in article usage particularly in the last couple of years (Figure 1). The journal also continues to attract attention via social media and news platforms, reaching far beyond the scientific community, as we can see when looking at the articles published in 2021 with the highest Altmetrics scores (Figure 2).

In comparison with the previous year’s overview, we see even a bigger outreach as high-impact multidisciplinary topics are

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**Table 1.** Top 10 most cited Advanced Science articles in 2021, published in 2019–2020 (data extracted on December 7, 2021).

| Title                                                                 | Corresponding Authors, Affiliation                                                                 | Published in | Citations in 2021 (Web of Science) | Total Citations (CrossRef) |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|--------------|------------------------------------|---------------------------|
| 3D Printing of Personalized Thick and Perforable Cardiac Patches and Hearts | Tal Dvir, Tel Aviv University, Israel                                                               | June 2019    | 163                                | 302                       |
| PEDOT:PSS for Flexible and Stretchable Electronics: Modifications, Strategies, and Applications | Xi Fan, Wanyi Nie, and Yonggao Xia, Chinese Academy of Sciences, Ningbo, China and Los Alamos National Laboratory, USA | July 2019    | 125                                | 222                       |
| Evolution and Synthesis of Carbon Dots: From Carbon Dots to Carbonized Polymer Dots | Bai Yang, Chinese Academy of Sciences, Changchun, China                                             | September 2019 | 132                                | 220                       |
| Defect-Rich Heterogeneous MoS2/NiS2 Nanosheets Electro catalysts for Efficient Overall Water Splitting | Junlei Qi, Harbin Institute of Technology, China                                                    | May 2019     | 156                                | 219                       |
| Recent Progress in Biomimetic Anisotropic Hydrogel Actuators        | Jiawei Zhang and Tao Chen, Chinese Academy of Sciences, Ningbo and Beijing, China                   | January 2019 | 76                                  | 160                       |
| Plasmonic Photothermal Nanoparticles for Biomedical Applications      | Jung-Hoon Lee and Jwa-Min Nam, City University of Hong Kong, China and Seoul National University, South Korea | July 2019    | 87                                  | 151                       |
| Toward the Application of High Frequency Electromagnetic Wave Absorption by Carbon Nanostructures | Qingshi Liao and Yue Zhang, University of Science and Technology Beijing, China                   | February 2019 | 80                                  | 138                       |
| ImmuCellAI: A Unique Method for Comprehensive T-Cell Subsets Abundance Prediction and its Application in Cancer Immunotherapy | An-Yuan Guo, Huazhong University of Science and Technology, China                                    | February 2020 | 80                                  | 135                       |
| Self-Healing Hydrogels: The Next Paradigm Shift in Tissue Engineering? | Alireza Dolatshahi-Pirouz, Technical University of Denmark, Denmark                                 | June 2019    | 89                                  | 125                       |
| Deep Learning: A Rapid and Efficient Route to Automatic Metasurface Design | Jiafu Wang, Air Force Engineering University, Xi’an, China                                           | April 2019   | 83                                  | 106                       |

DOI: 10.1002/advs.202105675
published and shared, such as SARS-CoV-2, brain–machine interfaces, solar cells, drug delivery and immunotherapy.

To establish *Advanced Science* as required reading in its many represented disciplines is a continuous job. Last year, new categories were implemented during the submission process to better oversee and serve the multidisciplinary community. After a full year, Figure 3 illustrates the topical landscape of the authors who choose us, with Biomedical Engineering, Diagnosis & Therapy, and Energy Storage harbouring the most articles. We will keep working on strengthening the most underrepresented fields in 2022.

A great deal of creativity is required to make scientific breakthroughs, and art is just as often an expression of (or a product of) scientific knowledge. Always inspiring, our authors brought their creativity and artistic vision to their research topics with their cover art (Figure 4).

With the ever-growing popularity of *Advanced Science*, hard choices have to be made and rejections of very interesting, but maybe too specialized research is inevitable. In 2021, we have therefore launched 3 new open access sister journals in particularly strong fields: *Advanced Energy and Sustainability Research*, *Advanced NanoBiomed Research* and *Advanced Photonics Research*. We are convinced that these titles present a very attractive alternative to *Advanced Science* offering all advantages of gold open access publishing and enjoying the high standards of all journals in the *Advanced* journal family.

In line with continuing to improve the author, reviewer, and reader experience, in *Advanced Science* and in its sister journals, many additional initiatives have already been carried out or will be implemented this year.

By being part of a tightly connected and expanding journals’ network, your manuscript can be easily transferred, saving you time, effort, and increasing the chance of your work being published. More information on our transfer network and how it facilitates the publication of your manuscript can now be found here.

Being supported by a broad, international community, and with a strong motivation to address diversity, equity and inclusion (DEI), we are reviewing our Editorial Advisory Boards to ensure that it better represents the community we serve. To better deliver this, our team was also reinforced, having now 23 editors and 3 supporting staff, comprising 11 different nationalities across 7 different editorial offices (Berlin, Weinheim, Shanghai, Beijing, Hoboken, Boston and Sidney).

To complement the existing virtual Issues Health Medical Life Sciences and Editor’s Choice: Reviews, which are regularly updated, *Advanced Science* is now part of the Rising Stars Series and of the Women in Materials Science Virtual Issue alongside other Advanced- and Small-flagship journals. Research articles on studies conceptualized and supervised by recognized early career researchers from around the world as well as outstanding works created, steered, and led by women scientists are collected and highlighted in these (Figure 5).

Y6 organic thin-film transistors with electron mobilities of 2.4 cm² V⁻¹ s⁻¹ via microstructural tuning by Edgar Gutierrez-Fernandez et al. and LectinOracle – A Generalizable Deep Learning Model for Lectin-Glycan Binding Prediction by Daniel Bojar et al. are the inaugural contributions of *Advanced Science*.
Figure 3. Representation of the proportion of accepted manuscripts between January-November 2021 according to their submission-category. Grouped together as “Other” (represented in grey) are the categories contributing less than 1.5% to the accepted manuscripts in the same time-frame. For the full category-list please refer to Figure 5 of last-year’s Editorial.

Figure 4. A sample compilation of the cover art created by the authors who chose to publish with us last year. For more details and access to all covers you can check our Cover Gallery 2021.

to the Rising Stars series, being part of this Issue 1, while 10 articles are currently collected and highlighted in the Women in Materials Science.

Additionally, as a way of highlighting outstanding work, Editor’s Choice has been implemented across the whole Advanced series and other sister journals for Research Articles. These articles are selected based on recommendations by the reviewers and editors and reflect the significance of their results. Fine-Tuning of Cholesterol Homeostasis Controls Erythroid Differentiation by Lu et al. is the first article published in Advanced Science to receive this tag and we are looking forward to many more highlights.

Figure 5. Rising Stars Series as an additional platform for upcoming authors in the initial stages of their working lives as a principal investigator to showcase their creativity and help driving the impact on the scientific landscape in their respective fields of research, and Women in Materials Science as a collection of outstanding works created, steered, and led by women scientists around the world, showcasing the high impact these leading individuals have on shaping their fields. Needless to say, both inspiring new generations of scientists to come.
Without knowing when meeting you face-to-face can be realistically achieved, we are currently planning an exciting online event with our new sister journal *Small Science* in March. Stay tuned for more details.

Last but not least, a wholehearted thank you—to our authors, reviewers, Advisory Board members, and readers. We look forward to more exciting publications in the upcoming year and the whole team wishes you a happy, healthy, and successful 2022 (Figure 6)!

And please let us know if you have any feedback, ideas, or suggestions – we are committed to keep on improving and to continue to be your journal of choice.

On behalf of the whole team,

Kirsten Severing and Ana V. Almeida