

EDITORIAL OPEN

A new flexible venue

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Flexible and plastic electronics is a growing and forefront field of research and innovation, offering the prospect of new design paradigms, methods of manufacture and advanced applications. These span, though are not limited to, consumer electronics, energy, healthcare, telecommunications, logistics, and information security. The discipline builds on multidisciplinary expertise, often team-based, with insights and skills required from chemistry, materials science, physics, life science and engineering. Also required, to engender thought-provoking advances, are lateral thinking and creativity, and for application, a determination to drive those advances into practical uses.

As an exciting new platform to bring together the best research and innovation from a diverse community, *npj Flexible Electronics* will support the development of this field by publishing high-quality papers related to flexible electronic systems in their entirety, such as plastic electronics and emerging materials, device design and fabrication technologies, and applications. The journal will act as a community voice for the discussion of ideas and identification of major research challenges and new approaches, such as through the publication of discussion-based 'Perspectives' and invited 'Editorials', written by members of the research community.

There are a number of critical areas of interest for the field, including high-throughput deposition and patterning, and the interfacing and integration of soft and hard materials, often with widely varying properties. Bringing together such dissimilar materials in one device requires ingenuity and free-thinking. Device design becomes even more complicated when considering the range of properties that must be matched. Mechanical, electrical, thermal, electronic and optical properties—including their control, manipulation and optimization—are all important, as are systems-level constraints and requirements.

Flexibility encompasses structures and devices that are required to be flexible in their function; think ribbon-cable-like electronics controlling a moving stage or robot-limb; think a skin-conforming patch or fibre-like mechanical sensor; think, ultimately, wearable and clothing-integrated device technologies. Flexibility also embraces substrate properties that facilitate manufacturing and assembly without the end use itself requiring function-related bending or twisting. Common examples are mobile phone displays that are smooth-contour-following, and building-integrated roll-to-roll printed solar cells sandwiched within glass panels or blocks. Flexibility further represents a broader propensity for change or reconfiguration, in response to a stimulus that is thereby sensed or interacted with, or as a means to add, modify or even repair functionality. These are the areas of research that we seek to promote within *npj Flexible Electronics*, and bringing all of these elements together within the purview of a single, high profile, theme-focused journal is, we believe, very timely for the development of the field and sets *npj Flexible Electronics* a clear objective.

A core theme of this journal is that it is run by active members of the flexible electronics community. We have experience of

running research centers and programmes spread across China (Nanjing Tech University, Nanjing University of Posts and Telecommunications and Northwestern Polytechnical University—Wei Huang; Oxford Suzhou Centre for Advanced Research—Donal Bradley) and the UK (University of Sheffield, Imperial College London and University of Oxford—Donal Bradley). Our research focuses on all aspects of flexible materials and devices, ranging from synthesis to final application. We are supported by a Deputy Editor and a talented team of Associate Editors, as well as the wider Editorial Board, all of which represent the geographic and thematic diversity of this community. It is our belief that having this journal embedded in the community it serves—through an editorial team composed of active researchers—helps important and cutting-edge research papers to be recognized and appropriately guided through the peer review and publication processes. Indeed, we welcome all feedback from the community in how we might develop this journal to best suit the needs of researchers, and to respond to challenges faced. With this breadth of experience in science, technology and innovation within our editorial team we trust that we will be well placed to steer the path of *npj Flexible Electronics*.

We wholeheartedly look forward to welcoming you to our journal, as an avid reader, a proud author, a supportive referee and in time, we trust, a committed follower of *npj Flexible Electronics*.

ADDITIONAL INFORMATION

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