

Introducing *RSC Applied Polymers*Cite this: *RSC Appl. Polym.*, 2023, **1**, 8Emily Pentzer 

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With great excitement, we share the first issue of *RSC Applied Polymers*, the newest gold open access journal published by the Royal Society of Chemistry. *RSC Applied Polymers* joins the robust publishing portfolio of the Royal Society of Chemistry, complementing other materials publications by focusing on the application of polymer-based materials. As an open access publication, the visionary research reported in our journal is available, accessible, and usable to all researchers across the globe.

RSC Applied Polymers is a cross-disciplinary journal that publishes visionary and impactful polymer research that provides fundamental understandings of structure–function–application relationships foundational for advanced technology development. We welcome both experimental and theoretical studies, or a combination thereof, with a focus on the application of naturally occurring or synthetic polymers. The applications of interest may be material-oriented, such as membranes, coatings, or textiles, or address the use of polymers in biology or energy management. The inaugural issue of *RSC Applied Polymers* includes ten publications from six different countries. These studies report coatings of polyionic liquid bearing coumarin counterions as corrosion inhibitors (<https://doi.org/10.1039/D3LP00017F>), antifouling polymers for uranium extraction from seawater (<https://doi.org/10.1039/D3LP00052D>), and the application of a cellulose monolith as column material for efficient protein separation (<https://doi.org/10.1039/D3LP00041A>), in addition to a combined experimental and computational study on the impact of methylation on gas separation membranes (<https://doi.org/10.1039/D3LP00092C>). Other studies report how vat 3D printing polymerization and post-processing can be used to tune the properties of polymer-hydroxyapatite composites (<https://doi.org/10.1039/D3LP00013C>), or bio-based vitrimers with high thermal stability and tunable thermomechanical performance (<https://doi.org/10.1039/D3LP00019B>). In the area of polymers for energy-related applications, MXene–polymer hydrogel sensors are reported for human–machine interactions (<https://doi.org/10.1039/D3LP00052D>), dynamic polymer nanocomposites are prepared as strain sensors and customizable resistors (<https://doi.org/10.1039/D3LP00012E>), and a chitosan binder is developed for aqueous electrolyte supercapacitors based on MWCNT–polymer composites (<https://doi.org/10.1039/D3LP00061C>). In the area of polymers for biological applications, the use of metalloproteinase-responsive hydrogels for the programmed killing of invasive tumor cells is reported (<https://doi.org/10.1039/D3LP00057E>). The common thread amongst the works published in *RSC Applied Polymers* is how synthesis and/or processing impact the properties and performance of polymers or their composites.

Our vision for *RSC Applied Polymers* is that it is an international leader and home of scientific excellence for authors, reviewers, and readers interested in the varied applications of polymers. Indeed, polymers are integrated into nearly every aspect of modern life, yet we are at a pivotal time as polymer scientists and engineers. As a community, we must work towards not only improving the performance of polymeric materials and establishing how they can be used in new frontiers, but we must also address their fate after end use. *RSC Applied Polymers* supports these initiatives by publishing multidisciplinary research with a wide-reaching positive impact on society, from sustainability to human health and well-being, to affordable and clean energy. Thus, the work published in *RSC Applied Polymers* guides current and near future-research, providing a vision for what could be possible.

The editorial team of *RSC Applied Polymers* is dedicated to quality, integrity, and transparency in publishing, creating a home for scholarly discussion, and ensuring that the journal meets the needs of the community. I am joined by associate editors Rachel Auzély-Velty, Pengfei Cao, and Peter Wich, whose combined expertise encompasses the scope of the journal. Prof. Auzély-Velty's expertise spans the chemistry and physico-chemistry of polysaccharides and biomaterials for applications across targeted drug delivery, cell therapy, and tissue engineering; Prof. Cao is a leading expert in elastomers, adhesives, and energy-related applications, as well as self-healing and

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recyclable materials; and Prof. Wich has broad expertise in engineering biopolymer materials for drug delivery, biocatalysis, and additive manufacturing.

We are delighted to support the journal's interdisciplinary voice in the application of polymers and to help break down barriers to advance the chemical

sciences. We welcome you to the inclusive community of *RSC Applied Polymers* and encourage your engagement with the journal as reader, author, and reviewer.

