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## Celebrating 20 years of *Soft Matter*

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Soft matter has been and will always be critical to the world. From the confluence of physics and chemistry that define the origins of life to the delivery of nutrients that sustain, as well as from critical yet possibly less-glorious technologies such as adhesives and coatings to rheology modifiers, soft matter structure–property–performance relationships are central to understanding and enhancing the world around us. In May 2005, the scientists and engineers linked by the common desire to contribute to this critical topic were provided a new forum, *Soft Matter*, for sharing and exchanging ideas, advances, and perspectives. For the past 20 years, *Soft Matter* has grown immensely, and it is our pleasure to share this 20th Anniversary Collection of original research papers, reviews, and perspectives to reflect on and celebrate the impact that our field has had and will continue to have on the scientific community and the broader society.

Professor Ulrich Steiner and Dr Carol Stanier launched *Soft Matter* with the goal of creating a “forum for the communication of fundamental science underpinning the properties and applications of soft matter.” At the time of the

launch, it was stated that “*Soft Matter* is the **only** journal for the many interdisciplinary soft matter communities.” This leadership provided a strong foundation for the field, and not surprisingly, it inspired numerous other journals to follow their lead, recognizing the expansive reach and impact of soft matter.

Over the past two decades, the topics published in *Soft Matter* have evolved, providing a parallel view of the field’s growth (see Fig. 1). In the early years, from 2005–2010, papers emphasized the engineering and understanding of surfaces and interfaces, discussing new insights and materials for controlling adhesion and achieving conventionally-challenging phenomena, such as superhydrophobicity. Fundamental studies of complex fluids, for example in the context of magnetorheology and electro-rheology, set a course for active, real-time adjustment of properties and processing conditions. From 2011–2015, fundamentals of interface and surface phenomena connected to observations in nature, such as self-cleaning rice leaves, and the development of engineered structures that could mimic them. Many foundational papers were published to demonstrate how soft materials provide access into functional instabilities, such as snap-through instabilities, that could be used in soft robotics. Soft materials, by allowing for ion transport and the storage of elastic forces, also provided platforms for other

nature-inspired systems, such as hydrogel walkers. Such publications helped to define the scope of *Soft Matter*, by showing how fundamental knowledge and control of materials structure through chemistry and physics can give rise to new engineered control in systems that synergize with the soft, adaptable materials of life.

Through *Soft Matter*’s second decade, new physics and understanding of coacervate liquid–liquid phase behaviour and liquid crystalline polymers have helped drive engineering concepts and designs for new materials. Emphasis on processing and manufacturing, in the form of additive manufacturing and 4D printing, have set the stage for significant steps in health applications, controlling biointerfaces, and energy harvesting technologies. Composites between inorganic and organic materials, as well as liquid metal soft materials systems, have provided new opportunities for discovering how multifunctionality needs can also lead to new, unexpected structures and phenomena. Collectively, the first two decades of *Soft Matter* have shown the field is linked by the themes of interfaces, networks, colloids, emulsions, and responsive and active systems. It’s unsurprising that this has driven the reliance upon machine learning and artificial intelligence methods to help guide and understand the complex interactions in these materials systems.

The editorial boards, led by former Editors-in-chief, Martien Cohen Stuart,

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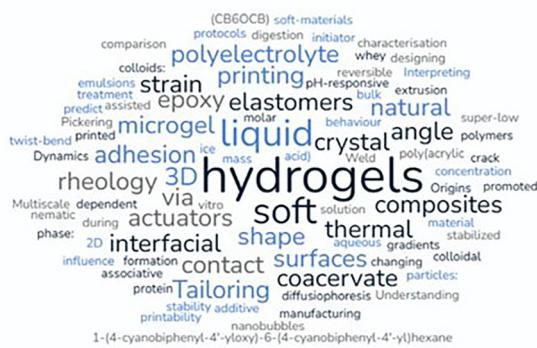
2005-2010



2011-2015



2016-2020



2021-2025

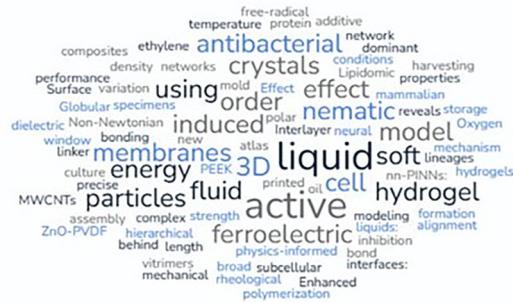


Fig. 1 Word clouds of article titles published in *Soft Matter* across 5-year intervals (2005–2010, 2011–2015, 2016–2020, 2021–2025). Wordclouds generated using simplewordcloud.com with the parameters "hide common words, 200 words cloud".

Michael Rubinstein, and Darrin Pochan, carried on the vision mapped by Steiner and Stanier and built frameworks for scaffolding the growth of the field. Themed collections have provided mechanisms for new topical areas, communities, and most importantly, individuals to integrate with the field and enhance its diversity. Topics have ranged from *proteins and cells at functional interfaces* to *food as soft matter* to *polymer networks*, with each allowing editors to bring together experts, some classically defined by the field as well as others who are only tangentially connected at first, in order to demonstrate how chemistry, physics, biology, and engineering principles can be united to offer new advances. Perhaps the most impactful themed collection is the Emerging Investigator Series, which was launched in 2009 and has continued annually to highlight the newest scientists and engineers who are impacting the field. Themed collections provide a critical service to the field by allowing authors to publish without fees while

also allowing their contributions to be free to read for the first year.

## Highlights of the 20th anniversary collection

In this spirit and with the goal of reflecting on the past two decades while also looking forward to the next twenty, we are thrilled to provide the 20th Anniversary themed collection (Soft Matter 20th Anniversary Collection). We invited many of the founding contributors to *Soft Matter*, as well as the researchers who have provided some of the most important advances recently and since 2005, to share their latest research as well as offer perspectives on where the field is headed. The topics covered include soft matter with embedded intelligence; data-driven discovery processes; the latest in multiscale self-assembly; unifying scalings that demonstrate the reach of soft matter physics; simulations that provide understanding and demonstrate

need for breaking limits in characterization; new active engineering concepts that leverage the physics of liquid crystalline polymers; and many many more. We hope you will take the opportunity to read many of these papers, share them with your colleagues and students, and use them to help drive the next wave of innovation that extends the boundaries of *Soft Matter*.

## Activities from this past year celebrating the 20th anniversary

Celebrating this collection began in 2025, and we'll be continuing to amplify its reach throughout 2026. We have enjoyed organizing symposia that feature recent winners of the prestigious *Soft Matter Lectureship* and hosting receptions at the *American Physical Society* meeting; sharing celebratory remarks and a great cake (Fig. 2) at the *Advances in Supramolecular Gels Faraday Discussion*; and sharing



Fig. 2 Soft Matter 20th Anniversary cake (image from <https://doi.org/10.1039/D5SM90056E>).

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insights on publishing and recognizing achievements of new scientists through poster awards at the *Chinese Colloid and Interface Chemistry Conference (CCCIC-19)*. In 2026, we look forward to celebrating the latest *Lectureship* winner Professor Ankur Gupta ([Announcing the winner of the 2025 Soft Matter Lectureship – Soft Matter Blog](#)) at *APS* in Denver; having *Soft Matter* editors together to support and learn from the diverse community at the *International Soft Matter Conference (ISMC)* in Goa, India, in May; and sharing remarks and sponsoring sessions and awards at numerous other conferences and events around the world.

## Themed collections

Recently published and ongoing themed collections in *Soft Matter* are shown below. Browse all past collections on our [platform](#), and see our upcoming collections

on our [calls for submissions](#) page. We will be announcing more collections during the year, so keep a look out!

- *Soft Matter Pioneering Investigators* – Showcasing research by mid-career investigators firmly established as pioneers in the field of soft matter.
- *Soft Matter Open Access Spotlight* – Showcasing all Gold Open Access articles published in 2025
- *Soft Matter Electrified* – Guest Edited by Ignaas Jimidar (Vrije Universiteit Brussel, Belgium/University of Twente, The Netherlands), Saurabh Nath (Massachusetts Institute of Technology, USA), Jonathan Singer (Rutgers University, USA) and Scott Waitukaitis (Institute of Science and Technology, Austria). This themed collection focuses on topics as diverse as contact electrification, granular matter, separation of plastics, electrospinning/spraying and many more.

- *Soft Matter Underpinnings of Micro- and Nanoplastics* – Guest Edited by Guruswamy Kumaraswamy (IIT Bombay, India), Sanat Kumar (Columbia University, USA) and Tom McDonald (University of Manchester, UK). This collection focuses on mechanistic understanding of microplastic formation, transport processes relevant to microplastics in the environment, methods for preparation of realistic model microplastics for study, characterization of microplastics and interaction of microplastics with cells.

## Future of Soft Matter

The past twenty years have shown that *Soft Matter* is dynamic, growing through the vision of the researchers and editors who are driven to help society. We envision new frontiers for soft matter science in understanding behaviors and properties in extreme environments, improving resiliency and circularity, and in ensuring safe and healthy interactions with people and the broader world. While these frontiers are already being pushed by many in the field, we take the most pride in being ready and open to publishing the freshest perspectives, connections and discoveries that will change the way we think and innovate. We thank you for your support over the past 20 years and look forward to the next 20 and more!

Professor Alfred Crosby, Editor-in-Chief

Dr Maria Southall, Executive Editor