



## Special issue: Self-assembled structures and materials for accessing new functions

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The self-assembly of (macro)molecules using various methods (bulk, solution, surface and so on) is a powerful tool for producing functional materials with unique nano- to macroscale structures. Self-assembly can generally be achieved by a low-energy bottom-up process under ambient conditions without any special laboratory equipment. Self-assembled (macro)molecules can show unexpected new properties that are significantly different from the original properties of the individual (macro)molecules. In fact, biological systems effectively utilize (macro)molecular self-assembly in aqueous phases to hierarchically produce complicated structures that are essential for realizing sophisticated biological functions. Even in polymer science for materials development, the concept of self-assembly is being further studied and developed every day. To introduce the latest developments in self-assembled structures and materials with new functions, we organized a hybrid team composed of the Editor-in-Chief, an associate editor,

and guest editors to cover a wide range of topics in this special issue.

Since 2012, *Polymer Journal* has published 8 special issues about pertinent topics in polymer science and related fields [1–8]. In particular, *Polymer Journal* is celebrating its 50th anniversary this year and published a commemorative issue this January [8]. Following the great successes of previous special issues, we collected 7 Original Articles, 1 Note, 15 Focus Reviews, and 3 Reviews from outstanding researchers from Asia, the United States, and Europe for this issue. These papers will undoubtedly be fascinating and stimulating to the diverse readers of *Polymer Journal*. We therefore believe that this special collection will contribute to further advances in the self-assembly of polymers. We sincerely appreciate all authors and referees for their contribution to this special issue.

### Compliance with ethical standards

**Conflict of interest** The authors declare that they have no conflict of interest.

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