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EDITORIAL

Special themed issue on "Responsive gels"

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This issue of *Colloid and Polymer Science* is devoted to the continually expanding field of responsive gels. While solvent-swollen polymer networks have been a topic of interest for many decades, networks that are able to respond to environmental cues such as changes in temperature, pH or other external fields have led to completely new lines of research. In this volume, the editors have attempted to capture a snapshot of the current state of the field, which, while focused on a specific type of material, is impressive in its intellectual breadth.

Responsive gels have shown themselves to be outstanding model systems that allow researchers to probe fundamental aspects of soft matter. Those fundamental studies have, in turn, permitted responsive gels to be employed in a variety of different applications. This themed issue reflects the various directions of this very active research area. Most of the contributions from Germany are part of the Priority Programme SPP 1259 "Intelligent Hydrogels" funded by the Deutsche Forschungsgemeinschaft since 2006. Their continued commitment to this discipline is reflective of the continued vibrancy of the research. Beyond Germany, this issue contains contributions from five other countries; the field of responsive gels is clearly an international one.

A notable characteristic of the field are its sub-divisions related to the length-scales and dimensionalities of the materials. Thus, this special issue presents work covering all aspects of stimuli-responsive macroscopic gels, as well as investigations of micro/nanogels and thin films. New synthetic approaches are addressed as well as physico-chemical aspects and theoretical models. We sincerely hope you enjoy this special issue, and through it, gain an appreciation for both the scope and depth of the work produced by the responsive gels community.

G. Sadowski and the editors of *Colloid and Polymer Science*

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