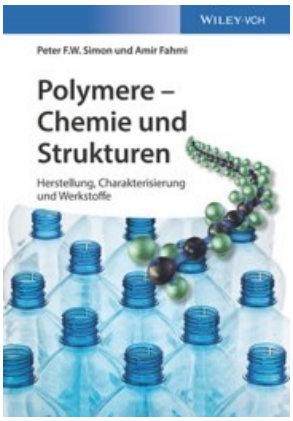
Research Interest

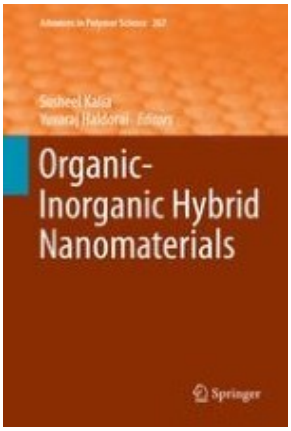
- Nanofabrication via directed self-assembly of (bio-) copolymers at different dimensions and length scales
- Functional nanostructured hybrid (bio-) materials
- Nanoparticles synthesis, size control and assembly at 1D-, 2D-, and 3D-dimensions
- Fabrication of nano-objects as markers to study complex biological systems
- Bio-inspired hybrid materials based on dendrimers templating inorganic moieties
- Nanofibers fabrication via electrospinning for biomaterial applications
- Exploration of simple synthetic approaches (in-situ) combined with external stimuli to fabricate functional nanocomponents possessing unique physical properties for new generation miniaturized devices
- Rheology of polymeric materials and hybrid systems

Publication list

Books



Simon F Peter, Fahmi Amir
Polymere-Chemie und Strukturen: Herstellung, Charakterisierung und Werkstoffe.
John Wiley & Sons. 2019; ISBN: 978-3-527-33462-9



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Christopher P Martin, Matthew O. Blunt, Emmanuelle Vaujour, Amir Fahmi, Anthony D'Aleo, Luisa De Cola, Fritz Vögtle, Philip Moriarty (2011). Self-Organised Nanoparticle Assemblies: A Panoply of Patterns. 2013
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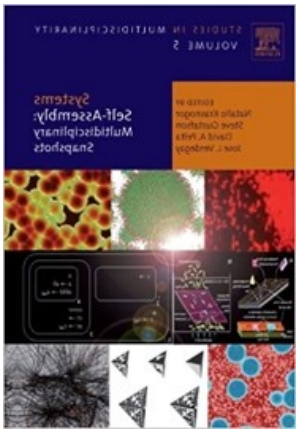

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2024

Poly(glycerol sebacate)-based soft-tissue-mimicked active layers for triboelectric nanogenerators" (JMSC-D-23-07020R1) **Accepted Journal of Materials Science**.

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