



Vabilo na Preglov kolokvij / Invitation to the Pregl colloquium

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Velika predavalnica Kemijskega inštituta /
Great Lecture Hall, National Institute of Chemistry;
Hajdrihova 19, Ljubljana, Slovenia

Multifunctional shape memory polymers based on adaptive covalent networks

Shape-memory polymers (SMPs) are remarkable materials able to switch from a temporary shape to their initial permanent shape by crossing a thermal transition, e.g. melting transition. Efficient shape-memory effect is notably observed for chemically cross-linked semi-crystalline polymers. Chemical networks of semi-crystalline poly(ϵ -caprolactone) are widely studied for the development of SMPs especially when biomedical applications are foreseen. As these SMPs are irreversibly cross-linked materials, their (re)processing is quite limited since they cannot be molten or solubilized after cross-linking. This prevents any recycling. Thereby, using reversible cross-linking reactions allowing the formation or cleavage of the network upon a selected stimulus, raise tremendous interest for the development of smart SMPs. Therefore, we have synthesized and studied covalent adaptive networks sensitive towards various stimuli (temperature, light, stress) leading to multifunctional shape memory materials.

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Vljudno vabljeni / Kindly invited