

Synthesis of novel simultaneous stimuli-sensitive block copolymers to temperature and pH

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This project aimed to develop new type of block copolymers and graft copolymer on the basis of N-isopropylacrylamide and 2-oxazoline.

Copolymers were thermo-switchable and also showed sensitivity to environmental acidity (pH).

New nanomaterials (nano-hydrogels) were developed at *Leibniz-Institut für Polymerforschung Dresden e. V.* (Germany) based on these materials by treatment of the graft copolymers onto electron beams. The resulting materials may find application in the field of biomaterials, nanotechnology and sensors.

One paper was written in 2011 which was approved by the German magazine of polymers: *Macromolecular Chemistry and Physics*. This paper will be included in the special chapter "Switchable Macromolecular Systems".