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Secondary structure-driven self-assembly of reactive polypept(o)ides: Controlling size, shape und function of core-crosslinked nanostructures

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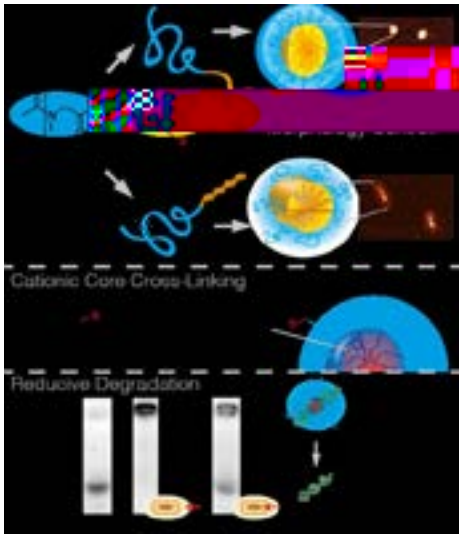

Figure 1: Self-assembly of amphiphilic PSar-b-PCys(SO$_2$Et) block copolypept(o)ides yields spherical or rod-like nanoparticles, depending on the secondary structure of the polymer. A er self assembly the core functionality is introduced by disul de core-crosslinking, which proves to be bioreversible.

Biography

Olga Schäfer studied Biomedical Chemistry at the Johannes Gutenberg University Mainz and obtained her graduate degree in 2014. After her Diploma thesis on Sethylthiosulfonyl- L-cysteine in peptide synthesis she started her PhD on the implementation of reactive block copolypept(o)ides for biomedical applications in the junior research group of Matthias Barz. The developed multifunctional polymers are applied in the shape controlled self-assembly of cross-linked nanostructures for delivery of therapeutic cargos such as chemotherapeutic drugs and nucleic acids.

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