Seminar
"IRTG Soft Matter Science"

UPy-based supramolecular polymers - a modular approach to biospecific materials

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Supramolecular materials have been shown to be suitable for a variety of different purposes, including many biomedical applications. In particular, biodegradable prepolymers modified with the quadruple hydrogen-bonding ureido-pyrimidinone (UPy) unit, combine easy processing (e.g. melt processing at relatively low temperatures), tunable mechanical performance (e.g. strength), and tunable degradation behavior, which can be exploited in various ways.

Here, I will discuss the possibilities of using the UPy-based supramolecular polymers as permanent/temporary scaffold in tissue engineering. Preliminary results show a strong correlation between various UPy-based functionalized peptides and cell adhesion properties. Furthermore, I will present our current research towards identifying and evaluating appropriate materials for biomedical applications. Finally, I will discuss the relationship between polymer surface structure and cell activity.

Thursday, February 10th, 14h15
"Hörsaal Makromolekulare Chemie", Stefan-Meier-Str. 31, Freiburg

You are welcome to meet Dr. Ewelina Burakowska-Meise, do not hesitate to contact Christelle Vergnat (softmattergraduate@physik.uni-freiburg.de)