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Using CRP tools to introduce peptides and proteins into the world of polymer science

POLY 5

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The precise integration of monomer sequence-defined peptides or proteins into well-defined synthetic polymers results in interesting hybrid macromolecules (e.g. peptide-block-polymer copolymers) that are referred to as “peptide-polymer conjugates” or “protein-polymer conjugates”. This tutorial provides an overview of the different strategies that are available to prepare such bioconjugates, exploiting the potential of controlled radical polymerization methodologies. Besides discussing the synthesis strategies, selected properties of this interesting class of macromolecules will be presented, as they prospectively enhance both the structural and the functional space available for polymer assemblies. This might allow the rational design of hierarchically ordered (nano)-structures, including the generation of structure based functions. Furthermore, polypeptides have the potential to interact with biological systems. Hence, the resulting bioconjugates could be capable of communicating with biosystems, making bioactive assemblies and materials attainable.

[5th Controlled/living Radical Polymerization Symposium](#)

8:20 AM-12:25 PM, Sunday, August 17, 2008 Sheraton Philadelphia City Center -- Liberty Blrm A, Oral

[Division of Polymer Chemistry](#)

[The 236th ACS National Meeting, Philadelphia, PA, August 17-21, 2008](#)