



Biohybrid polymers and vesicles

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“ « Amphithéâtre de l'Institut Charles Sadron »,
23 rue du Loess, 67034 Strasbourg

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

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The combination of living anionic polymerization and thiol-ene photoaddition techniques is a convenient and versatile route towards well-defined polymeric amphiphiles and biohybrids (bioorganic-synthetic polymers carrying peptide, sugar, etc. moieties). The synthesis and aqueous solution behavior of homopolymer and block copolymer amphiphiles, especially of glycopolymers, based on polybutadiene will be presented. The glycopolymers can readily self-assemble into large vesicles, either consisting of a symmetric or an asymmetric membrane (Figure 1), the latter case representing a (primitive) mimic of a biological cell membrane.

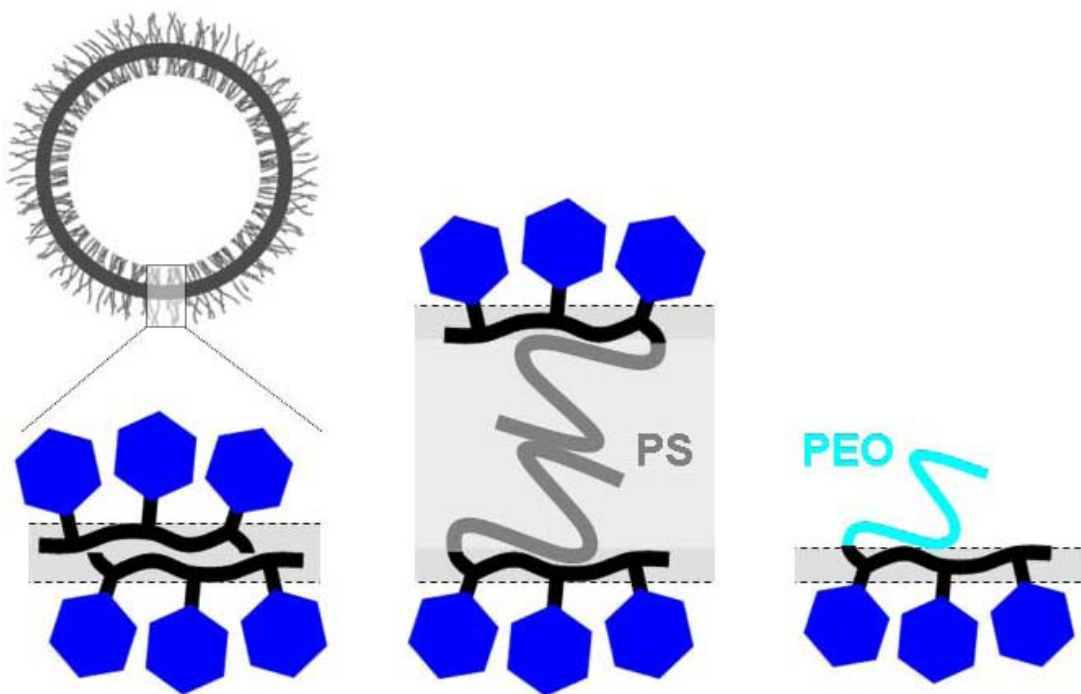


Figure 1. Schematic illustrations of the different structures of glycopolymer vesicles (glucose units are represented as hexagons, PS = polystyrene, PEO = poly(ethylene oxide)).