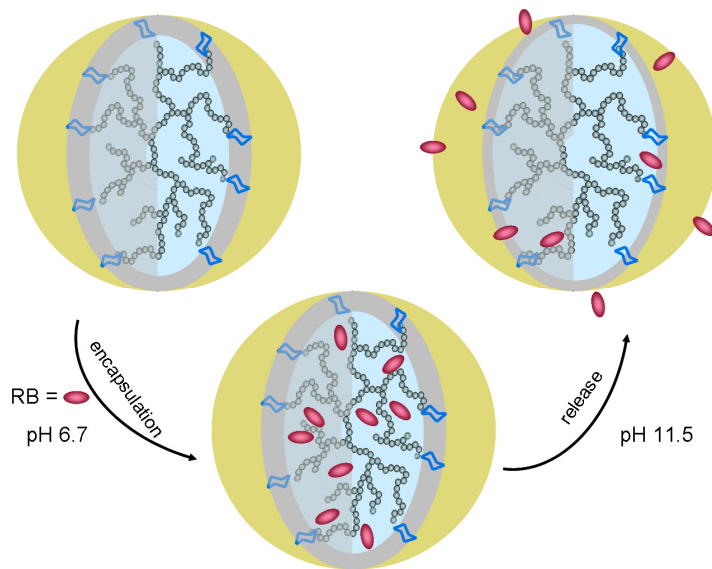
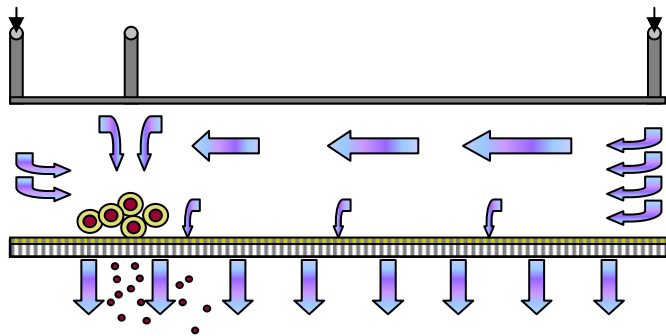


## Quantification of polymer host-guest complexes

Dendritic core-shell molecules can serve as a host for dyes, drugs and other small molecules. For this purpose, the dendritic scaffold is highly modified by biocompatible functional groups, e.g. oligosaccharides, building a shell around it. Commonly, the separation and determination of the guest molecules from the complex is performed by means of dialysis, ultrafiltration or ultracentrifugation followed by UV-vis analysis in batch. However, for most of the polymer system these methods provide non-quantitative information about the complexation capacity as a result of different chemical moieties within one host molecule.



Therefore, we consider the ultra-filtration effect of AF4 suitable for this quantification. During the focusing phase ultra-filtration is taking place, filtering the free guest molecules through membrane from the channel while the host-guest complex remains inside. The quantification of the complexation is complementary performed by two ways: determination of the free guest molecules and calculation of the molar mass of the complexes by static light scattering detection.