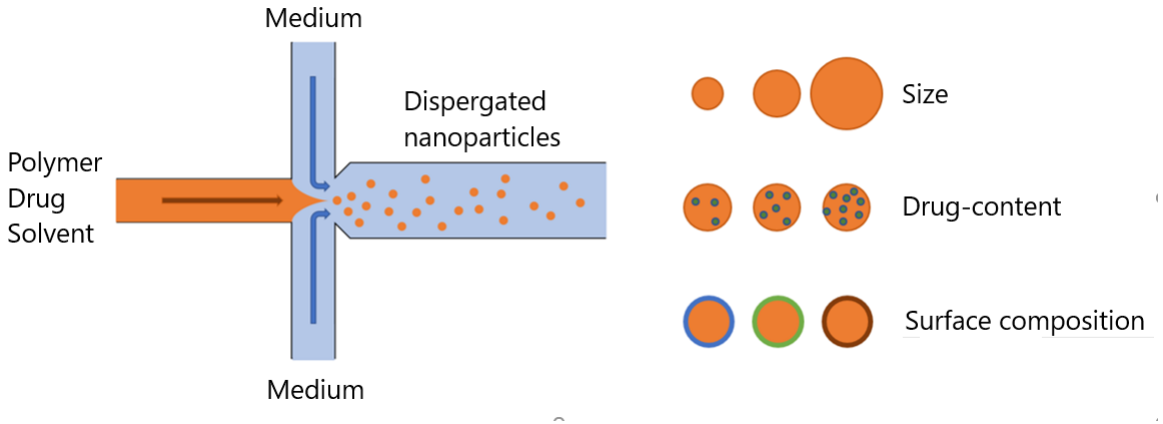
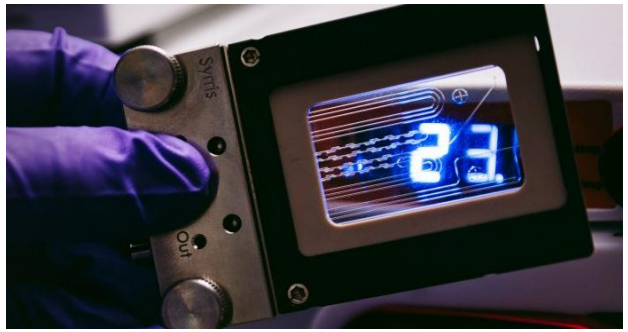
Microfuidic reactor

Dr. Ábrahám Ágnes, Dr. Gyulai Gergő /ELTE TTK/





In the Laboratory of Interfaces and Nanostructures one of the main focus of our work is the synthesis and characterization of polymeric drug carrier nanoparticle systems. Utilizing microfluidic systems the nanoformulation of valuable peptide-based drugs is also possible at high efficiency. The ASIA Microfluidic reactor acquired through the SzintPlusz project will greatly expand our capacity for the preparation of nanoencapsulated systems. In cooperation with the MTA-ELTE Research Group of Peptide Chemistry our group will encapsulate various small molecular and peptide-based drug candidates into polymeric nanoparticles. Using the reactor the effect of encapsulation temperature and flow rates on the particle size, encapsulation efficiency and drug content can be studied even with materials that are only available in small quantities, resulting in the optimization of the bioavailability of the drugs. The acquisition of the instrument has been realized, the experimental work can be soon started.