Polymer and Biomaterials Synthesis Group (Assoc. Prof. Ondřej Sedláček)

Assoc. Prof. Ondřej Sedláček's group focuses on the development of **highly functional polymeric materials** that respond to external stimuli such as **light, temperature, or pH**. These **"smart" polymers** have applications in **biomedicine**, for instance in the design of targeted drug delivery systems.

The team employs an **interdisciplinary approach**, combining polymer and organic chemistry, biochemistry, and medicine. They use advanced synthetic methods, such as **photocatalyzed controlled radical polymerization** and **cationic ring-opening polymerization**, to produce polymers with precisely defined architectures – linear, branched, or **self-assembling block copolymers**.
Dr. Sedláček leads projects funded by **GAČR and AZV**, with a focus on developing innovative materials that can enable **new therapeutic strategies and targeted biomedical applications**.

Learn more: Polymer and Biomaterials Synthesis Group