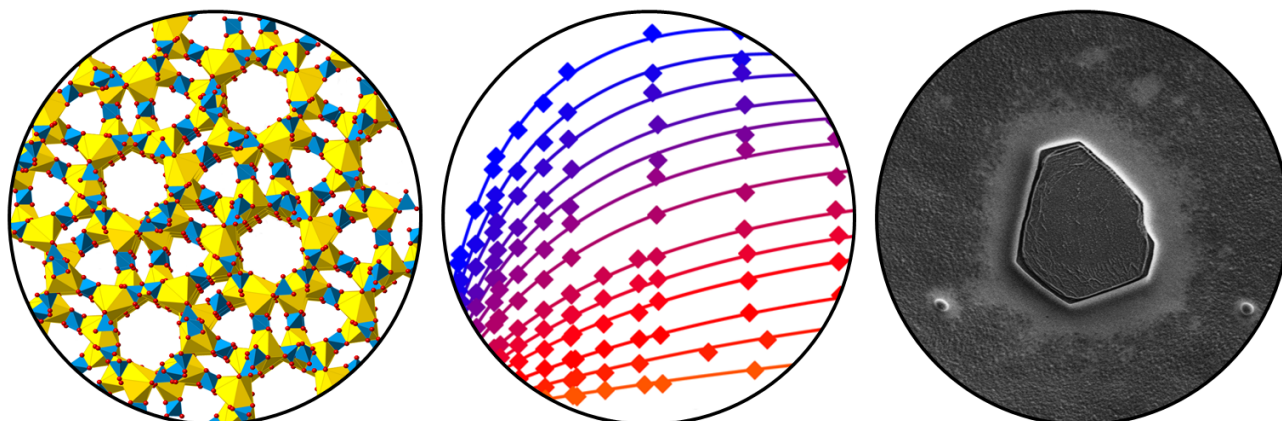
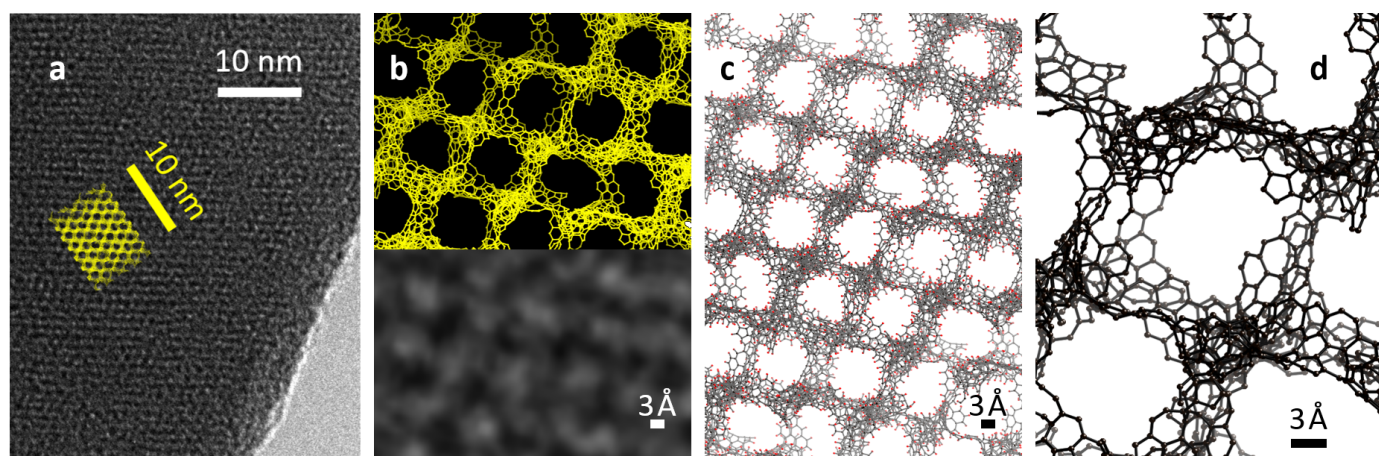


STADIE RESEARCH GROUP



Our research spans the fields of solid-state, physical, and materials chemistry; we explore new synthesis routes to carbon-based energy storage materials. We have a special fondness for materials with molecular channels built into their structure, allowing for interesting chemistry to take place inside. These materials are used to store energy-rich fuels like hydrogen and can also be used as the electrodes in batteries or supercapacitors.



Above. Zeolite-templated carbon (ZTC) is a material of great interest to our group. Transmission electron microscopy reveals its atomic structure at the ~ 1 nm (10^{-9} meters) length scale. Further computational modelling provides an understanding of the finer details, at < 1 Å (10^{-10} meters) resolution.

Undergraduate researchers of many diverse backgrounds undertake research projects in our group: from electrical engineers to chemical engineers, chemists, geologists, mechanical engineers, and computer scientists.

We have a demanding, but fun- (and safety-) oriented research environment, designed to ensure that every student has a unique research topic and scientific hypothesis.

Relevant MONT facilities: electron microscopy, various spectroscopic techniques, and deposition/sputtering.
Prerequisites: interests in energy storage and a willingness to learn new things.