Dynamic covalent chemistry (DC\textsubscript{v}C) has proven to be highly effective in the construction of well-defined molecular architectures and structurally ordered polymers. The error-correction mechanism enabled by the reversible formation of dynamic covalent bonds leads to the formation of structurally ordered, thermodynamically favored species. The Zhang group research is focused on the development of novel DC\textsubscript{v}C reactions/catalysts and utilizing them to develop novel functional molecules and polymeric materials targeting a broad range of environmental, energy, and biological applications, such as carbon capture, molecular separation, nanocomposite fabrication, energy storage, and self-healing materials. Design, synthesis, and applications of ordered polymer materials, including recent discoveries of an unprecedented single-crystal DNA-like helical covalent polymer (HCP) and a novel carbon allotrope, -graphyne will be discussed.

For more information see: https://clas.ucdenver.edu/chemistry/seminars-and-events