Our group is interested in “applied” supramolecular chemistry. While previous work in the field of supramolecular chemistry centered mostly on fundamental research, current developments suggest that chemistry is well poised to make significant contributions to various research fields. In particular, supramolecular sensors for biologically important species or pollutants are some of the most promising applications of molecular recognition materials. To be harnessed for rigorous analytical assignments, our research centers on the molecular design and synthesis of materials as well as the fabrication of devices.

**Construction of Molecular Recognition Sites for Target Analytes**

To capture target analytes in aqueous media, we design and synthesize novel artificial receptors and molecular recognition sites.

**Transducers for Information of Molecular Recognition**

In the realm of electronics, organic thin-film transistors (OTFTs) are some of the most interesting devices owing to their flexibility, solution processability and ultra small thickness. In this regard, we are developing OTFT-based chemical sensors functionalized with artificial receptors.

**Multi-analyte Detection Methods**

Our attention is being devoted to the development of supramolecular sensor arrays, owing to their capability to recognize a number of analytes with high classification accuracy. With that in mind, we particularly focus on the simultaneous analysis of multi-analytes in biological fluids or environmental water.