Project summary of Asst. Prof. Harun Koku:

Liquid chromatography is a commonly used separation and analysis process in pharmaceutical industry and biotechnological production.
The fine details in the geometries of the separation materials of chromatography directly affect the purification performance. Therefore, the research and development on the enhancement of these types of materials by direct modeling of the micro-structure is becoming widespread.
The aim of this project is to create cluster geometries using artificial particles, comparing the structure of these particles and clusters with the real materials using electron microscopy and predict the chromatography performance of the artificial geometries by flow and mass transfer simulations. It is expected that the findings of this study is going to contribute to the new generation material design and understanding.

Project summary of Asst. Prof. Emre Büküşoğlu:

Wearable sensor materials for medical and occupational safety applications are going to be developed.