Acoustic Manipulation of Suspension Rheology

Complex fluid suspensions are used in many advanced material applications (self-healing materials, light impact-resistant materials) and often have fluid properties e.g. viscosity that can be changed significantly with a variety of perturbations (temperature, particle density, etc.). In this project, we are using acoustic fields to manipulate the properties of colloidal suspensions in real time, so facilitate processing and manufacture of these materials. This project will be focused on acoustic device fabrication to study these processes.