

**URP/Honors Projects at the Department of Chemical and Biomedical Engineering,
FAMU-FSU College of Engineering (2020)**

Professor	Projects
Alamo, R.	<ul style="list-style-type: none"> • Effect of Melt memory on crystallization of high impact polyolefins • Self-assembly of conjugated novel polyethylenes
Ali, J.	<ul style="list-style-type: none"> • Fabrication and rheological characterization of trans-domain bioinks. • 3D bioprinting of mammalian-bacterial hydrogel co-cultures.
Arnett, A.	<ul style="list-style-type: none"> • Polymeric materials
Chung, H.	<ul style="list-style-type: none"> • Development of inorganic-organic hybrid bio-inspired adhesives for enhanced biocompatibility and physical properties. • Synthesis of self-healing/stimuli sensitive polymers using a novel Ruthenium catalysts.
Driscoll, T.	<ul style="list-style-type: none"> • Focal adhesion force transmission during cell migration in engineered fibrous networks. • Regulation of cellular contractile forces by tropomyosins. • Age related changes in cellular mechanosensors of fibrochondrocytes.
Grant, S.	<ul style="list-style-type: none"> • Magnetic targeting of iron oxide-labeled stem cells • Conductivity mapping in pathological human brain tissue (Parkinson's and Alzheimer's diseases) • Intranasal delivery for cellular therapy
Guan, J.	<ul style="list-style-type: none"> • Micro/nanoparticles for drug delivery or biosensing • Fabrication of Uniform Cholesterol Microcrystals
Hallinan, D.	<ul style="list-style-type: none"> • Thermal Diffusion in Polymer Electrolytes • Reaction Kinetics in Lithium Batteries with Solid Electrolytes
Holmes, C.	<ul style="list-style-type: none"> • Interactions between polymeric nanoparticles and surfaces for localized delivery of therapeutic nucleic acids
Kalu, E./Yeboah, Y.	<ul style="list-style-type: none"> • Simultaneous generation of electricity and value added chemicals in a biofuel redox flow battery • Hybrid electrocatalyst for hydrogen generation from water electrolysis • Glycerol electrooxidation
Li, Y.	<ul style="list-style-type: none"> • Characterization of human stem cell microenvironment • Self-assembly of human pluripotent stem cells • Expansion of human stem cells in a bioreactor system
Locke, B.	<ul style="list-style-type: none"> • Water-film plasma reactors for organic chemical synthesis • Characterization of hydrodynamics in water film plasma reactors.
Mohammadigoushki, H.	<ul style="list-style-type: none"> • Dynamics and Rheology of Living Polymers • Design of a Temperature and Humidity Controlled Chamber
Ramakrishnan, S.	<ul style="list-style-type: none"> • Structure Dynamics and Rheology of nanoparticle suspensions and gels

	<ul style="list-style-type: none">• 3D printing of light weight multifunctional composites• Synthesis of polymer particle nano composites for aerospace applications• Mechanisms of self-assembly of peptides into hydrogels
Ricarte, R.	<ul style="list-style-type: none">• Understanding structure-property relationships of vitrimers• Elucidation of nanoparticle self-assembly during polymerization-induced encapsulation
Siegrist, T.	<ul style="list-style-type: none">• Crystal Growth for magnetic systems for the Ising model