



Chemical Engineering Department,
P.O. Box 43675,
Lafayette, LA 70504

Biomedical Engineering and Advanced Materials (BEAM) Laboratory

Research Summary:

Micro and nanoscale materials offer tremendous advantages and opportunities for various applications. The focus of BEAM-Lab is to advance the research on advanced materials with tunable properties. Our highly interdisciplinary approach involves addressing the fundamental issues on the role of tumor mechanical state and tumor relapse. Current and future research includes understanding nanoscale level interactions between graphene nanoscrolls, carbon nanotubes and polymers. Using a combination of polymer processing, high-resolution microscopy, and imaging at nanoscale level, BEAM-lab involves graduate and undergraduate students to advance cutting edge research on cancer, biomaterials, and nano-structured materials.

Ongoing Projects:

Our ongoing research span multidisciplinary fields such as nanotechnology, polymer processing, chemical engineering, tissue engineering, and advanced materials. Our field of applications are bone and cancer tissue engineering, nanotechnology, high-temperature and high-performance tunable polymer nanocomposites, and biodegradable polymers.

Future Research:

We are interested in fabricating novel biomimetic and nanomaterials for advanced applications such as tissue engineering, cancer research and high-performance polymer nanocomposites. We utilize the state-of-the-art techniques such as nanoindentation and high-resolution electron microscopy to understand the structure-property-function relationship of various materials. We are also in pursuit to fundamentally understand the architecture of novel carbon based nanomaterial; graphene nanoscrolls to modulate physical and biological properties of specialty polymers.

Dilip Depan, PhD.,

Email: ddepan@louisiana.edu

Phone: (337) 482-6569; Fax: (337) 482-1220.

