CMDITR’s research mission is to create and use molecular building blocks in the rational design of new devices and subsystems for a broad spectrum of photonic and electronic applications, specifically in the areas of telecommunications, computing, lighting, energy, transportation, medicine and defense. To do this, CMDITR engages scientists and engineers across a spectrum of STEM disciplines: physics, chemistry, optical sciences, electrical engineering, mechanical engineering and materials science and engineering. Being a graduate student in CMDITR offers interdisciplinary research, training in inventorship, perspectives on industrial careers and other benefits that are not always offered in traditional research groups. This seminar will explore one of NSF’s seventeen current Science and Technology Centers in detail from the perspective of graduate student education. Research on terahertz signal generation and detection, and organic solar cells, will be discussed as examples of CMDITR projects.