

세미나 초록

성명	양지웅
소속	대구경북과학기술원(DGIST)
발표 주제	Studying Formation and Degradation Mechanisms of Colloidal Quantum Dots for Quantum Dot Device Applications
발표 내용	<p>Semiconductor nanocrystal quantum dots (QDs) exhibit exceptional optical and electrical properties, intricately linked to their structural characteristics. Gaining a comprehensive understanding of the formation and transformation mechanisms of QDs is critical to harnessing their full potential across diverse applications. This seminar will delve into my research on these mechanisms, beginning with an exploration of semiconductor nanoclusters, which serve as pivotal intermediates bridging the gap between individual atoms and fully-formed QDs. I will then highlight the application of in-situ transmission electron microscopy, a cutting-edge technique enabling real-time, direct observation of QD formation and transformation processes. Finally, I will examine how the atomic structure of QDs influences their performance in practical device applications.</p>