



제 1 회 KSEA Chicagoland Graduate/Post-Doc 세미나

대학원생/포닥 세미나는 다양한 분야의 연구를 소개하고, 대학생/고등학생들에게 도움을 줄수있는 정보를 주기위한 프로그램 입니다. 이번 첫 세미나에서는 노스웨스턴 대학원에 박사과정중인 장우제 대학원생이 material engineering 에 관한 세미나를 진행할 예정입니다. 비전공 일반인들도 이해할 수 있는 내용으로 구성하여 자유로운 분위기에서 토론할 수 있도록 하였으니 관심이 있는 분들의 많은 참여를 바랍니다.

<Semiconducting nanomaterials toward quantum informatic application>

The recent advance regarding semiconducting nanocrystals affects various emerging industries such as renewable energy, bioimaging, and electronic devices. Based on its interesting optical properties, the application of these materials toward safe and robust information processing. Depending on the controlled optical input, such as polarization, wavelength, and power, the emission from the nanocrystals has different features like an injective function. Modification on these materials has millions of controllability due to their nature of having a large surface area, which can be encapsulated via desired organic/inorganic materials. The composition of the core of the nanocrystals can also be altered by the synthetic/post-synthetic doping method, which results in utilizing the dopant's optical properties. The electronic coupling between the nanocrystals and the modified surface/core structure should be accompanied, affecting the electronic structure or the charge carrier movement via the charge or energy transfer process. Such material development can provide ample perspective in terms of optical input/output controllability and thereby move toward a system useful for quantum information applications.

Bio: Woo Je Chang is a PhD candidate in Materials Science and Engineering at Northwestern University. He earned master's degree and bachelor's degree in Materials Science and Engineering and Bioengineering from Seoul National University in 2014 and 2016, respectively. Mr. Chang is specialized in nanoparticle synthesis, solvothermal synthesis, electrochemical measurement, photocatalysis reaction, solar to fuel conversion, organometallic complex synthesis, protein extraction, electrochemical and chemical reactor designing.

■ 일시 : 2021 년 3 월 26 일 (금) 오후 4 시 (CST)

■ Zoom Meeting Address: (password: 843729)

<https://us02web.zoom.us/j/5461002463?pwd=cGxqL0I1OEFnYWh1d1VEWGxtMkVIUT09>

준비위원장: Chicagoland YG, 최선아

지부장: 정승원, AbbVie Inc.

* 세미나 참여 후에 랜덤 선택을 통해 식사권 (Soban, 쌍용 중식당) 을 드리도록 하겠습니다. 많은 참여 바랍니다.

재미과학기술자협회 시카고지부

KSEA, Chicagoland Chapter

<http://chicagoland.ksea.org>