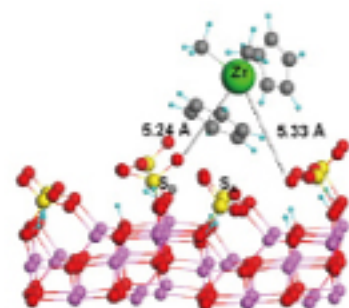


Surface Science Meets Homogeneous Catalysis. Surfaces as Activators and Ligands

When chemisorbed upon certain surfaces, the reactivity of many types of organometallic molecules is dramatically enhanced in ways that historically have been poorly understood. High activities for a variety of catalytic reactions are illustrative consequences of this altered reactivity. This lecture focuses on the intricate non-covalent and covalent multi-center interactions that modulate these catalytic processes, focusing primarily on polymerization and hydrogenation/dehydrogenation processes. Specific interrelated topics include: 1) Catalytic chemistry of mononuclear and multinuclear d⁰ catalysts anchored on/activated by surfaces versus those in homogeneous solution, 2) Catalytic chemistry and cooperativity effects in multinuclear groups 4 and 6 catalysts in homogeneous solution, 3) Definitive structural characterization of these catalysts on "super-acidic" oxide surfaces, and the broad scope of their catalytic properties, 4) Unusual catalytic chemistry of group 6 dioxo complexes adsorbed on activated carbon surfaces. It will be seen that the information obtained from these studies leads to design rules for next-generation homogeneous and supported catalysts, and for novel and useful polymerization and hydrogenation/-dehydrogenation processes, including the catalytic detoxification of gasoline, stereoselective hydrogenation of aromatics, biofeedstock transesterification, and bio-alcohol dehydrogenation.

Prof. Tobin J. Marks



2nd GCPC Symposium

Grubbs Center for Polymers and Catalysis, GIST

September 17, 2018
고등광기술연구소(APRI) 강당

I N V I T A T I O N

안녕하십니까?

노벨그룹스고분자중합촉매연구센터 제2회 심포지엄을 개최합니다.

올해는 특별히 촉매 개발과 고분자 및 유기전자재료 개발에 탁월한 업적을 남기고 계시는 Tobin Marks 교수님을 모시고 심포지엄을 열게 된 것을 기쁘게 생각합니다.

저희 센터는 2016년 설립된 이래 GIST에서 연구개발한 리빙음이온 중합법과 칼텍의 복분해 중합법을 함께 응용하여 고기능성 블록/그래프트 공중합체 소재의 합성과 새로운 촉매개발을 목표로 연구를 수행해 오고 있습니다.

그동안 보내주신 관심과 애정에 감사드리며 이번 심포지엄이 활발한 의견교환과 논의의 축제의 장이 될 수 있기를 희망합니다.

감사합니다.

노벨그룹스고분자중합촉매연구 센터
부센터장 이 재 석



S C H E D U L E

TIME	Program	Venue
PM 1:45 ~ 2:00	Registration	고등광기술 연구소(E5) 강당
PM 2:00 ~ 2:30	Prof. Jae-Suk Lee (GIST, GCPC Vice director), Welcome remark and brief introduction of GCPC	
PM 2:30 ~ 3:00	Prof. Seok Min Yoon (Wonkwang University), "Mixed-Valence Rhenium Oxides and Their Catalytic Activities"	
PM 3:00 ~ 3:30	Dr. Sunho Jeong (KRICT), "Printable Hybrid Materials for 3D-Printed Electronics"	
PM 3:30 ~ 4:00	Prof. Myung-Gil Kim (Chung-Ang University), "Solution Processed Inorganic Materials for Advanced Functionality Development in Large Area Electronics"	
PM 4:00 ~ 4:15	Coffee Break	
PM 4:15 ~ 4:45	Prof. Sukwon Hong (GIST), "Development of Catalysts and Organic Electronic Materials"	
PM 4:45 ~ 5:45	Prof. Tobin J. Marks (Northwestern University), Plenary Lecture: "Surface Science Meets Homogeneous Catalysis. Surfaces as Activators and Ligands"	
PM 6:00 ~ 8:00	Welcome Dinner	