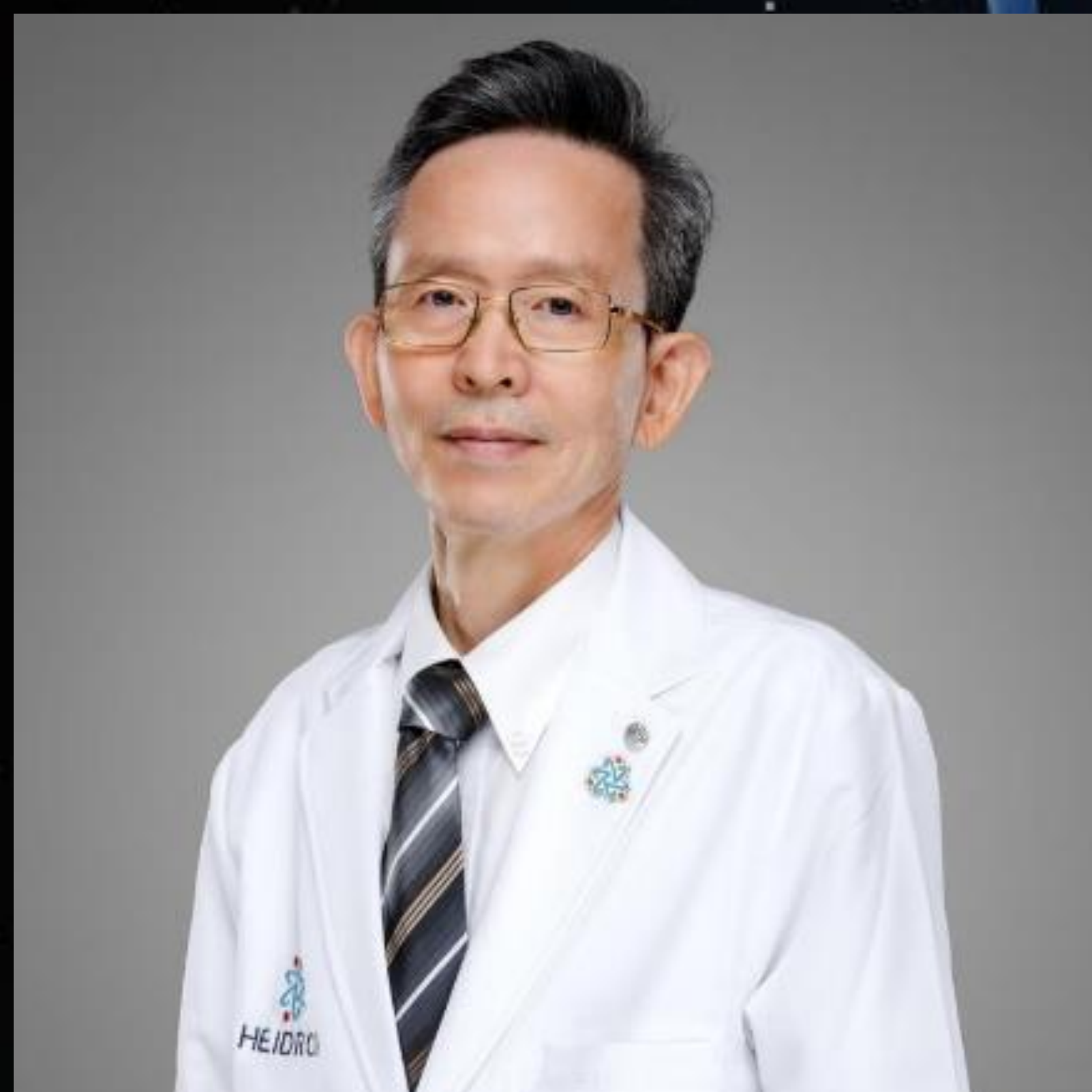




## Energy Up! 글로벌 역량강화 Networking Seminar series Vol.2

### Effective Energy Storage for Carbon Neutral



최 성 회 (Daniel Choi)

Director of Korea-UAE Joint R&D  
Technical Center

Department of Mechanical & Nuclear  
Engineering

Khalifa University of Science and  
Technology

Abu Dhabi, United Arab Emirates

#### Biography

Dr. Daniel Choi received his B.S. in Metallurgical Engineering from Seoul National University (South Korea) and Ph.D. in Electrical Engineering from UCLA in US. Dr. Choi was a staff member for three years at the Aerospace Corporation and a task manager Jet Propulsion Laboratory (JPL)/NASA in US for nine years, leading a number of space-related projects for Mars Missions such as Phoenix and Mars Science Laboratory projects. Prior to joining Masdar Institute in the United Arab Emirates (UAE), he was an associate professor and program director of the Materials Science and Engineering program at University of Idaho in US. During his career in US, he has led a number of the projects sponsored by DARPA, AFOSR, DOE, NASA, Amy Lab, NSF, NIH, etc. Currently, he is Founding Department Head of the Mechanical and Materials Engineering in Masdar Institute in UAE. In addition, he developed the UAE's first graduate-level Space Program (CubeSat) at Masdar Institute. His research focuses on energy storage applications (batteries and capacitors), MEMS inertial sensors (gyroscopes and accelerometers), metal-materials and 3D printing technology. He is Science Team for UAE Emirates Mars Mission Program and serves as Director of Korea-UAE Joint R&D Technical Center as well as Director of Khalifa University & KAIST Joint Research Center. He has been serving as a member of Mohamed bin Rashed Academy of Science (MBRAS) since 202. Dr. Choi is also a co-founder of HEIDRON Energy

#### 문의 및 일정

- 시간: 2023년 11월 13일  
➢ 오후 4시 30분~6시 30분
- 장소: 고려대학교 공학관 364호
- 전화번호 : 02) 3290-4270
- 탄소중립특성화 대학원행정실:  
고려대학교 신공학관 104B호

#### Abstract

Moving towards carbon neutral and carbon negative products is becoming an essential change, not an option these days. My research group is interested in developing variety of engineered/advanced material systems and devices for energy applications, in particular, energy storage and recycling batteries. It is our group objective to control micro to nanometer-scale features to enhance material properties and device functions beyond those that we currently know. During my presentation, two areas of ongoing research will be presented, namely: (i) Sustainable Li-ion battery recycling technology and ii) High-energy density battery based on engineered materials. In the second part of my talk, an overview of the activities in Korea-UAE R&D Collaboration and the R&D ecosystem in UAE will be briefly presented.