

第230回講演会  
【開催：2024年5月21日（火）】

主催 中国地区化学工学懇話会

下記の要領で講演会を開催します。多数の方のご参加を頂きますようお願い致します。

記

日時：2024年5月21日（火）10:00～11:30

場所：広島大学工学部A4棟112室

交通：山陽本線西条駅下車，バス15分，大学会館前下車

山陽新幹線東広島駅下車，タクシー10分

講演内容：

This presentation is divided into two parts and will explore innovative approaches in cryptography and energy storage. Cryptography is used to protect data by encrypting it and ensuring that only authorized individuals have access by using, for example, mathematical one-way functions. In the first part of the presentation, a new solution for the upcoming risk of hacking one-way functions, due to the rise of quantum computing is discussed. This new solution includes a chemical unclonable function (CUF) system, utilizing large random DNA pools to provide a robust, distributable, and scalable approach for anti-counterfeiting systems, non-fungible objects, and decentralized multi-user authentication. In the second part, the challenge of renewables having higher energy production in the summer and greater demand in the winter is presented, and a safe seasonal energy and hydrogen storage system as a potential solution is discussed. This system utilizes the redox pair of iron/iron oxide, stores energy in iron powder produced on site with electrolytic hydrogen, and releases energy with steam.

講師および講演題目：

Mr. Giezendanner Kelani (ETH Zurich)

Exploring Chemical Unclonable Functions as an Innovative Tool in Cryptography and Novel Approach for Seasonal Energy Storage

参加費：無料

申込先：FAX または電子メールでお申し込み下さい。

中国地区化学工学懇話会

TEL 082-424-7718, FAX 082-424-5494, E-mail: ysasa@hiroshima-u.ac.jp