



第 2 回非鉄製錬学セミナー
Non-ferrous Extractive Metallurgy Seminar

**Sustainable Recovery of Precious Metals from Chloride Lixiviant
using Biomaterials with Novel Functionality**



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ABSTRACT:

This presentation will focus on the recovery of some non-ferrous metals, such as gold, platinum and palladium from chloride media using biomaterials. Conventional hydrometallurgical processing of metals involves the use of large quantities of toxic chemicals. Realizing a need to develop sustainable technologies, extensive research studies are being carried out to recover and recycle precious and rare earth metals from their pregnant leach solutions (PLS) using biomaterials prepared from biomass wastes derived from agriculture, marine and forest resources. Our innovative research showed that bio-adsorbents prepared from such biomass wastes can effectively adsorb precious metals after conversion of their functional groups in a very simple process. The highly effective “Adsorption-Coupled-Reduction” phenomenon suggested the potential use of these biomaterials in the gold mining industry. Proper management and effective use of biomass wastes as value added materials will not only reduce the volume of wastes being generated every day in our society, but will also have a high end value to the mining and mineral processing industries as those biomaterials would be cheap, but very selective for non-ferrous metals recovery/recycling from low grade ore, leach residue or e-wastes.

- 日時： 2018年7月20日(金) 15:30 – 16:30
□場所： 物理系校舎 112 講義室
□事前申し込み： 不要
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PRESENTER'S BIODATA:

Shafiq Alam is an Associate Professor at the University of Saskatchewan, Canada. In 1998, he received his Ph.D. degree in Chemical Engineering from Saga University, Japan. He was then appointed as a Post-Doctoral Fellow at the University of British Columbia and the University of Toronto, Canada. From 2003-2005, he worked as a Research Scientist at AIST, Tsukuba receiving a prestigious NSERC-JSPS Fellowship.

Dr. Alam has extensive industrial experiences. He possesses 2 patents and has over 140 publications. He is the co-editor of 7 books and an associate editor of the International Journal of Mining, Materials and Metallurgical Engineering. He is the winner of the 2014 TMS Extraction & Processing Division's Technology Award.

Dr. Alam is an Executive Committee Member of the Hydrometallurgy Section of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM). From 2015-2017, he served as Chair on the Hydrometallurgy and Electrometallurgy Committee of the Minerals, Metals & Materials Society (TMS) of USA. He is an active co-organizer of many international conferences through CIM and TMS. The next one will be the "Rare Metals Extraction & Processing" Symposium at the TMS 2019 Conference in San Antonio, Texas. Please try to attend that symposium.