



演 題 : **Progress report on the CALMAR system and in
Scanning Droplet Cell Microscopy (SDCM)**

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場 所 : 工学部材料・化学棟中会議室 (MC102)

共 催 : 電気化学会・腐食防食学会・表面技術協会各北海道支部

要旨 :

Combinatorial material science has a high potential to speed up the development of new alloys and complex materials. Material libraries are prepared in a combinatorial approach and subsequently undergo high throughput screening. In this way serendipity can be systematically approached. The CALMAR is a sophisticated research cluster that has been launched in 2011 at the ICTAS/JKU. Being an open system both, operation and further development are going in parallel. It allows for the production of materials libraries using thermal evaporation (THEO), co-sputtering (CODO), and co e-beam evaporation (SCUBA). Composition and structure determination is possible using SEM, EDX, EBSD, SXRF, SXRD, SAES and SXPS. Reactivity and chemical screening is realised by SKP and sophisticated SDCM.

For this purpose scanning droplet cell microscopy (SDCM) has been extended in several ways to address the needs for an automated and combined investigation of materials. New developments will be introduced to demonstrate that SDCM can be also used to perform efficiently photo electrochemistry PE-SDCM and downstream analytics. New ways of producing SDCM using 3D-printing with improved microfluidics are presented.

本講演は、大学院総合化学院『化学研究先端講義／総合化学特別研究第二』の一部として認定されています。

連絡先 : 工学研究院物質化学部門 伏見公志 (内線 : 6737)

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