Seminar: セミナーのお知らせ

A seminar by Prof. Chan-hung Shek from City University of Hong Kong will be held in the schedule shown below. Participation by any staffs and students is welcome.

香港市立大学の石燦鴻先生をお迎えして、以下のセミナー（講演会）を行います。各研究室の学生諸氏にもご回覧いただければ幸いです。ご来聴を歓迎いたします。

April 8th (Thu)  10:00〜11:30
Room 102, Sogo Kousha 1F

日時：2010年4月8日（木） 10：00〜11：30
場所：工学部総合校舎 1F 102教室

Enhancement of Properties of Bulk Metallic Glasses

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Abstract

Bulk metallic glasses are attracting increasing interest due to their excellent properties, e.g. isotropic homogeneity, high strength, high elastic limit or catalytic activity. Their high moldability allows making microscale industrial parts which cannot be produced with existing common crystalline alloys. Due to their viscous flow behaviour and excellent microformability under very low stresses in the supercooled liquid temperature range, these materials are promising for fabricating nano/micromachines. Albeit these attractive properties, there are some major shortcomings of BMGs, namely, the relatively low ductility and the susceptibility to oxidation in some alloy families. In this seminar, some current ways of improving the ductility of BMGs will be reviewed and the relevant work in City University of Hong Kong will be summarized. Furthermore, the oxidation behaviours of copper-based BMG will be discussed. The use of plasma-immersion ion implantation for the enhancement of oxidation resistance of a Cu-based BMG and the pertinent mechanism will be explained.

Biography

Dr. C. H. Shek is currently an Associate Professor and Assistant Head of Department of Physics and Materials Science, City University of Hong Kong (CityU). After having obtained his BSc in Engineering from The University of Hong Kong (HKU) in 1988, he worked as a graduate engineer in the Kowloon and Canton Railway Corporation in Hong Kong for one year before pursuing his PhD in HKU. He joined CityU in 1994 as an Assistant Professor immediately after he got his PhD. His research interests are on the microstructure evolution and the associated changes in properties with thermal treatments of bulk amorphous alloys, nanocrystalline ceramic and other metallic alloys. He has published over 130 papers in international refereed journals and two book chapters.