The 65th

ICYS Special Seminar

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Title: Nanocrystalline metals and intermetallic alloys studies by TEM

Nanocrystalline materials composed of grains with sizes in the range of 100 nm have attracted extensive interest due to their unique properties. The properties of these materials are directly correlated to their structure. Transmission electron microscopy (TEM) is an excellent tool to study these structures down to atomic scale.

In my talk I will present two examples of recent work where TEM is used to tackle interesting questions. In the first part of my talk I will present results on in-situ straining of nanocrystalline Al and Au films in the TEM in order to explain both the extended microplasticity during loading and the recoverable strain during unloading. In the second part recent TEM results on nanocrystalline intermetallic FeAl produced by severe plastic deformation using high-pressure torsion will be shown and the structural modifications like re-ordering during short-time annealing will be discussed.

Chair: Dr. Koichi Tsuchiya, Deputy Director, ICYS, NIMS

Venue: 8th Floor **Room #811, Central bldg., SENGEN Site**

Date: **March 10th, Wednesday** ***Time:*** **3:00-3:45 pm**

Contact: International Center for Young Scientists (ICYS), Nakajima (ext 6075)