Contribution ID: **119**

Type: **Poster**

CHARACTERIZATION OF THIN FREE-STANDING AL-MG FILMS

Wednesday 9 September 2020 16:50 (30 minutes)

Small-scale thin films are frequently used in microelectronic devices and micro-electro-mechanical systems where they are commonly subjected to high strains during their dynamic motion. However, mechanical behavior of thin films significantly differs from the behavior observed in bulk materials. To understand the size dependent properties of deformation mechanisms, characterization of the grain properties of nano-scale materials is essential along with mechanical tests. A promising method is in-situ transmission electron microscopy deformation, which combines mechanical tests on a nano-scale with a direct observation of the structure even with an atomic resolution. Thin Al-based free-standing films prepared by DC magnetron sputtering were characterized by atomic force microscopy, conventional and in-situ transmission electron microscopy and automatic phase and orientation mapping in TEM.

Presenter: BAJTOŠOVÁ L. (Charles University, Faculty of Mathematics and Physics)

Session Classification: Poster session