## Recent transmission electron microscopy studies on defects and microstructures in various polycrystalline materials

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This talk will discuss the results of recent transmission electron microscopy studies on a variety of topics related to the thematical focus of the workshop. These topics include various precipitation features in Al alloys such as core-shell quasi-crystalline particles, in-situ micro-straining experiments in metals inducing phase transformations and defects interacting with grain boundaries, intergranular irradiation assisted stress corrosion cracking at crack tips in specimens from nuclear plants, radiation induced defects in nuclear grade tungsten, effects of nanoindentation in layered composite structures and stress-induced grain boundary amorphization in minerals such as olivine and talc.