SEMINAR FIZIČKOG ODSJEKA

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HIGH-RESOLUTION X-RAY DIFFRACTION AND DIFFUSE SCATTERING FROM DEFECTS IN EPITAXIAL LAYERS

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High-resolution x-ray diffractometry is a powerful tool for the investigation of structural properties of epitaxial thin layers, especially for the study of structural defects such as small precipitates of foreign phases and stacking faults, misfit and threading dislocations and mosaic blocks. In the talk, the principles of the method will be presented along with basic theoretical concepts describing the scattering processes from various defect types. A row of experimental examples will be presented including magnetic precipitates in magnetic layers Ge(Mn), (Ga,Fe)N and (Ga,Mn)As, defect in implanted semiconductor layers, misfit and threading dislocations in graded SiGe epitaxial buffers and complex defects in c-oriented wurtzite GaN epitaxial layers.

Voditelj seminara FO
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