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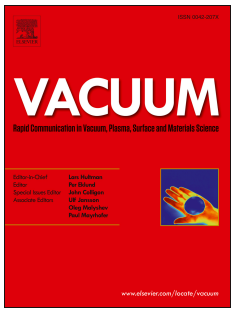

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Evidences of Sensitization Mechanism for PbSe Thin Films Photoconductor

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Abstract: Over the past decades, sensitization has been considered as a key process that determined the performance of lead selenide (PbSe) photoconductive detectors. However, insufficiency of evidences about the changes on material properties and structure in micro level becomes a barrier on comprehensive explanation of the sensitization mechanism. In this work, X-ray photoelectron spectroscopy (XPS) and X-ray diffraction (XRD) technologies were employed to characterize the materials properties evolution process of PbSe during sensitization. Changes on microstructure was identified in details by high-resolution transmission electron microscope (HRTEM).