Raman Spectroscopy for Stress Analysis

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Abstract

While Raman microscopy is predominantly used for chemical analysis the current talk will focus on its application to stress analysis. After the introduction of the basic formalisms, case studies on Si, Ge and alumina will be presented with the topic of stress amplification in thin bridge structures at the materials limits and 3D stress mapping in transparent materials. An outlook will be presented and how the only draw-back of Raman microscopy with regards to its limitation to polarizable materials can be remedied by a combination with reflectance anisotropy spectroscopy.

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