Università Politecnica delle Marche

Centro di Ricerca e Servizi di Analisi Globale dei Cristalli

ICRYS

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Series of Seminars:

SCINTILLATOR DETECTORS:

from Theory to Applications

(Medicine, Security, High Energy Physics and Engineering)

Seminar #2

Prof. Fabrizio Davì

DICEA, Università Politecnica delle Marche, Ancona

Elasto-optic models of anisotropic crystals

Room 160/3, May 9th 2018, 15.30 – 16.30

Facoltà di Ingegneria, Università Politecnica delle Marche,

Web-streaming: https://meet.lync.com/univpm-pm/s1062746/E9X2T63W

Topic

Photoelasticity is one of the most successful non-invasive techniques in the analysis of residual stresses in crystals, which are typically induced by the crystal growth, cutting and polishing processes. The interference fringes generated on an anisotropic crystal by polarized light depends on both the dielectric and elastic crystal properties and on the state of residual stress within the crystal. By starting from the basic of light propagation in crystal we shall show how the analytical knowledge of interference fringes allows for a very good estimate of residual stresses.

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