

エクストリームフォトニクスセミナー

Extreme Photonics Seminar



日時： 平成21年1月15日(木)
16:00 ~ 17:00, Jan.15 (Thu), 2009

場所： 研究交流棟5階会議室 W524
Cooperation Center, 5F Meeting Room, W524

題目： **Soft x-ray submicron imaging detector
based on point defects in LiF**

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要旨： The use of lithium fluoride (LiF) crystals and films as imaging detectors for EUV and soft-x-ray radiation will be discussed. The EUV or soft-x-ray radiation can generate stable color centers, emitting in the visible spectral range an intense fluorescence from the exposed areas. The high dynamic response of the material to the received dose and the atomic scale of the color centers make this detector extremely interesting for imaging at a spatial resolution which can be much smaller than the light wavelength. Experimental results of contact microscopy imaging of test meshes demonstrate a resolution of the order of 100 nm. This high spatial resolution has been obtained in a wide field of view, up to several cm². Images obtained on different biological samples, as well as an investigation of a soft x-ray laser beam are presented. The behavior of the generated color centers density as a function of the deposited x-ray dose and the advantages of this new diagnostic technique for both coherent and noncoherent EUV sources, compared with CCDs detectors, photographic films, and photoresists are discussed.

連絡先： 緑川レーザー物理工学研究室 事務室 (内線8532)

