Investigations of EUV conversion efficiency of luminophores

S. Herbert
RWTH Aachen

The efficiency of luminophores to convert impinging short wavelength radiation into visible (VIS) light and their self-absorption of the converted light has been investigated. Five scintillator crystals and seven phosphors were illuminated with extreme ultraviolet (EUV) radiation of 13.5 nm wavelength and the converted light measured with a photo diode. Parallel measurements of the EUV radiation with a dose monitor enabled the calculation of the conversion efficiency. Furthermore, the self-absorption of the samples has been investigated with a broad-band VIS spectrometer. This has allowed estimating the change of the conversion efficiency with the sample thickness.

**stefan.herbert@ilt.fraunhofer.de*