

**Exhibitor at "Optics & Photonics International Exhibition" (OPIE) from  
19. - 21. April 2023 in Yokohama / Joint Booth Thuringia No. D-36**

**Indigo Optical Systems**

*Indigo Optical Systems is a spin-off company of the University of Jena and the Helmholtz Institute Jena, Germany. Indigo offers various services for the short wavelength spectral range, such as the soft X-ray range (SXR), vacuum ultraviolet (VUV), extreme ultraviolet (EUV / XUV).*

[www.indigo-optics.com/](http://www.indigo-optics.com/)

<b>Company profile:</b> (max. 500 characters)
<i>Indigo Optical Systems GmbH is a spin-off of Friedrich-Schiller-University Jena, Germany. The company specializes in the development, manufacturing and distribution of innovative optical instruments for laser-driven EUV sources. The focus is on beam line, spectrometry, reflectometry and mask inspection. A newly developed digital microscopy approach makes it possible to save on costly optics while providing tools that are in some cases even more powerful than conventional mask inspection equipment.</i>
<b>TITLE 1:</b> (max. 200 characters)
<i>Next generation mask inspection tool for the semiconductor industry</i>
<b>Marketplace profile 1:</b> (max. 2.000 characters)
<i>Indigo currently addresses 2 markets - the industrial market of the semiconductor industry and the scientific/academic market.</i>  <i>In the industrial/commercial semiconductor market, the stable and efficient generation of short-wave EUV radiation at 13.5nm, which has been available for a few years now, enables the lithographic production of small structures in the nanometer range, which are imprinted in materials. Thanks to this new process, it is now possible to incorporate increasingly powerful microprocessors such as those in the iPhone and others. For this purpose, Indigo has developed a digital microscopy method that is capable of inspecting or measuring EUV optics/coatings and EUV masks, which are very important for lithography, cost-effectively in a compact setup. Evaluation projects with major industrial partners were and still are extremely promising. For this industrial market Indigo is looking for further industrial partners, suppliers and possible investors.</i>  <i>For the academic market, Indigo offers customized optical instruments in the wavelength range from approximately 100nm (VUV) down to 2nm (EUV/SXR). Instruments are specially designed and manufactured according to customer specifications. In close discussion the ideal instrument is built according to the application. Different types of instruments are possible, e.g. spectrometers, monochromators, interferometers, reflectometers, microscopes, filters, focusing systems and beamlines. Typical application fields for our instruments are materials science/solid state physics, atomic/molecular/laser physics, plasma/accelerator physics, life science. Methodologically, our instruments are commonly used for photospectroscopy, angle-resolved photoelectron spectroscopy, and coherent diffraction imaging. Indigo intends to find additional customers, suppliers and distributors for this academic market.</i>
<b>Type, field and role of envisaged partner</b>
<i>Possible industry partners: - tool manufacturer, chip manufacturer, partners in the supply chain, distributors for other countries Academic partners: - universities, research institutes</i>

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