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Project title	High Intensity Coherent Nonlinear Optics (HICONO)
Title	Fellow's report on activities : Optatec – International trade fair for optical technologies, components and systems (for optics industry and general public) (7th-9th June 2016, Frankfurt, Germany)
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I attended the 13th Optatec – International trade fair at the Frankfurt exhibition centre (<http://www.optatec-messe.de/en/>), on 7th June, 2016.

Goal : The fair focuses on recent technologies, development processes and industrial applications of optical manufacturing and measuring systems, fibre-optics and laser components. So, the goal is to provide an international opportunity to showcase the advanced technologies and potential innovations of optics industry.

Impact : Many world leading and as well newly formed companies from Europe and all over the world participated and displayed their effective future technologies, during this event. It was a great opportunity for the visitors (mostly optical components manufacturer and distributors, apart from that there were also some researchers and students from universities and academic institutions) to gather knowledge and new ideas about the emerging fields of industrial optics.

Methodology : The event was held for three days. Around 570 exhibitors from 31 countries participated in this event and about 50% of the participating companies, were from outside of Germany. Each exhibitor had particular stall for displaying and demonstrating their

machines which is indeed a great information and business platform for finding out potential clients through lively discussion and have views for further development from expert visitors. Though all the participants had affiliations from different optics industrial sectors, but their presentations can be broadly classified under the groups of – optical components (Lens, mirrors, Fibers-connectors, circulators, couplers, filters etc.), Optomechanics (optical-mounts, tubes and adapters, beam shutters, translation stage and rails etc.) / Optoelectronics (photo diodes, LEDs, LASER diodes, solar cells etc.), Fiber optics and light guiding devices, Laser components, Optical machines and manufacturing systems. Being a fresher at the time of attending this fair, I got the opportunity to get familiar with the optical instruments and products of renowned companies, through several technical presentations, panel discussions, information catalogues and machine demonstrations including step by step explanations of hardware and software parts.

We also demonstrated our high precision 3D form measuring system ‘LuphoScan 260 HD’ which is used for ultra-precision non-contact 3D form measurement of high quality optical surfaces. This instrument is ideal for applications where the highest accuracy is required and essential to the manufacturing process. The ‘LuphoScan’ contains the interferometer ‘LuphoSmart’ which works on the principle of multi wavelength technology. ‘Luphosmart’ runs with a compact optical sensor system that is driven by Piezo-electric traducers based mechanical phase modulation. I am currently working on this multi wavelength interferometric system to develop an electro-optic sensor by replacing the present piezo based sensor, and that is expected to improve the speed and accuracy for distance measurement. Thus, I was able to enrich my knowledge and gather information about many relatively similar Interferometer based measuring systems and different electro optical products, by interacting with other participating companies. We also got some important feedbacks and had useful discussions regarding our systems and its further improvements, with other experienced colleagues of different companies, who are associated with this field for many years. Overall, the event was large but very focused and informative which gave me an exposure to have an idea about the interesting new inventions of the optical-industry.