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Editorial

From the Guest Editor

Optics and photonics are key technologies for the 21st century. In Europe, *Photonics21* and in the USA *Harnessing Light I + II* are initiatives that make clear that this is not an empty statement but is also well supported by administrative, industrial and academic institutions. To deliver on the promise of photonics and optical technologies, a number of key boundary conditions have to be fulfilled. One of them is to produce optics in large quantities and at affordable prices. Only if these conditions are fulfilled will a larger adoption of devices take place and unleash the potential of advanced optical technologies.

Producing optical elements in plastic is one way of manufacturing large quantities of high-precision optics. Mostly, injection molding is the replication technology of choice for making the optical elements rather affordable. To push plastic optics in new areas of application, development and innovation is continuously progressing in this field. Furthermore, there is a growing number of people understanding the laws of producing in large numbers.

Stefan Bäumer studied physics in Germany and the USA. In 1988 he received his Master of Science degree from Washington State University. He subsequently returned to Germany to receive his PhD in physics at the Institute of Optics of the Technical University Berlin in 1995. Since then he has been working in several positions for Philips in Eindhoven, The Netherlands. Dr. Bäumer currently holds the post of Senior Principal Engineer at Philips Lighting. His work focuses on optical systems design for LED illumination with a specialization in plastic optics, involving close cooperation with injection molding and material companies.

Spectacles lenses have been an application for plastic optics for quite some time. Current application fields reach from consumer optics in cameras and flashlights of mobile telephones, optics for DVD/Blue-ray players to LED lighting optics and medical optics in the area of molecular diagnostics.

Therefore, I am happy to have a focus on plastic optics in this first edition of *Advanced Optical Technology*. Giving a short overview on the state-of-the-art, providing insights in the peculiarities of plastic optics and stimulating others to explore this exciting field of optical technologies is what I hope to achieve.

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