PARADIGM SHIFT IN THE OPERATIONS AND APPLICATIONS OF VOLUME BRAGG GRATINGS

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The talk will introduce and discuss in details several new holographic optical elements with unique properties and broad spectrum of applications. These elements could revolutionize applications such as ultra-fast pulse modulation, compact spectrometers, laser beam combining and others. The foundation of these elements is a chirped volume Bragg grating incorporating additional phase information or operating at modified incoming angles. We see these HOEs as a major paradigm shift in the operations and applications of volume Bragg gratings.

Biography

Dr. Ivan Divliansky is a Research Associate Professor of Optics & Photonics at CREOL, The College of Optics and Photonics at UCF. Currently, his research interests include high-power laser beam combining, solid state and fiber laser systems development, design, and applications of holographic optical elements. His current projects also include the development of the next generation head-up displays.

Dr. Divliansky has more than 85 conference proceedings and more than 35 peer review publications in journals such as Nature Photonics, Light: Science & Applications, Advanced Materials, Applied Physics Letters, Optics Letters, and others with total citations by other authors of more than 1550 and h-index of 16. He has edited one book and authored two book chapters, co-authored two patents, and is an Associate Editor within the editorial board of Frontiers in Physics, specialty section Optics and Photonics. He is also frequent referee for Optics Express, Optics Letters, Applied Optics, and other peer review journals.

Dr. Divliansky serves as a chair of Optica's Holography and Diffractive optics technical group.