Special Issue

Atomic Layer Deposited Thin Films for Optical Fiber Sensors

Message from the Guest Editor

Novel optical sensors most often require special thin films made of various materials, or surface structures with different properties, which initiate or modify their sensorial responses. The sensing properties of these devices strongly depend on properties of such thin film materials. In the atomic layer deposition (ALD) technique, gaseous chemical precursors are delivered to the reaction zone only separately in time. As a result, the complementary and sequentially repeated chemical reactions of the thin film growth take place in a self-limiting manner on the coated surface. Thanks to this paradigm, a truly atomic control of the film thickness is possible, and films are uniquely conformal, tight, and uniform, even when they are deposited on complicated high-aspect-ratio surfaces. Moreover, the ALD technique enables the deposition of a wide range of materials, which may show various properties as requested by optical sensors—oxide isolators, semiconductors and conductors, nitride isolators, metallic nitrides, luminescent materials, metals and many others. It is my pleasure to invite you to submit a manuscript for this Special Issue.

Guest Editor

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