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properties were controlled by external stimuli [7] thus opening to the fabrication of different tunable photonic platforms [8].

The last topic covered by the issue is related to the low refractive index of polymeric materials with respect to inorganic ones, which can limit their application for PC fabrication. C. Tavella et al. present the synthesis and characterization of a high-refractive index polymer ($n = 1.83$ at 600 nm) due to the inverse vulcanization by copolymerization of elemental sulfur with an organic thiofene based comonomer. Blending this polymer with polyvinylcarbazole enhances its processability towards high optical quality all-polymer planar photonic crystals [9].

In summary, the works collected in this Special Issue give an insight on the different research tendencies in the PC field that are focused on new materials, designs and lithographic protocols to improve the PC performances and extend their potential. As guest editors, we hope that such contributions will pave the way for the integration of PCs in more complex and smart devices and the introduction of new optical functionalities.

Author Contributions: M.D. and S.N. contributed equally to edit the Special Issue. All authors have read and agreed to the published version of the manuscript.

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