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Special Issue on Lithium Niobate Based Photonic Devices

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When a fundamental beam (yellow) is incident on the nonlinear photonic crystal with periodic variations of the medium second-order nonlinear coefficient ($\chi^{(2)}$), it can generate the second harmonic wave (blue) whose near-field nonlinear diffraction leads to self-imaging of the periodic $\chi^{(2)}$ pattern at the so-called nonlinear Talbot plane. A recent work has been devoted to demonstrating the nonlinear Talbot self-healing capability, namely the capability of creating defect-free images from faulty nonlinear optical structures. This ability may find applications in many fields including defect-free lithography and printing.

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The color images are shown online.