

## **Next Generation Nematic Liquid Crystal Devices Based on Polymer Stabilized Networks**

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A new technology developed at Meadowlark Optics based on sheared polymer stabilized liquid crystals has resulted in a new class of device with the capability of ultra-fast response times along with a large range of retardance stroke. Response times of  $< 100\mu\text{s}$  with transmissions of over 90% across a broad spectrum have been obtained with retardance uniformities across 2" apertures of better than 20nm. These "Next Generation" devices will be discussed with emphasis on applications including variable retarders, attenuators and high-speed shutters along with future plans for a true adaptive optic spatial light modulator based on this technology.