419. Title:III-nitride optoelectronic devices: From ultraviolet toward terahertz
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Abstract:We review III-Nitride optoelectronic device technologies with an emphasis on recent breakthroughs. We start with a brief summary of historical accomplishments and then report the state of the art in three key spectral regimes as follows: 1) Ultraviolet (AlGaNbased avalanche photodiodes, single photon detectors, focal plane arrays, and lightemitting diodes); 2) Visible (InGaN-based solid state lighting, lasers, and solar cells); and 3) Near-, mid-infrared, and terahertz (AlGaN/GaN-based gap-engineered intersubband devices). We also describe future trends in III-Nitride optoelectronic devices.