80. Title: Mechanism for THz generation from InN micropyramid emitters

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Abstract: We have investigated characteristics of THz waves generated by using a regenerative amplifier in InN micropyramids. Our experimental results indicate that when the density of the micropyramids becomes sufficiently high, the THz output power is dramatically enhanced. In comparison, the PL intensity stays more or less a constant regardless of the density. By measuring the dependences of the THz output power and polarization on the incident angle and pump polarization angle, we have deduced the contributions to the THz output powers from optical rectification and photocurrent surge. (C) Publication year: 2011 American Institute of Physics.