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**Raman and electrical characterization of n-**  
**InP implanted by 630-keV nitrogen**

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**Abstract**

The goal of this work was to study the peculiarities of lattice disorder and conductivity compensation caused by N-implantation in liquid encapsulated Czochralski grown n-InP single crystals. The ion-induced damage of the lattice was probed by resonant Raman scattering (RS) measurements. Layers with resistivity as high as  $10^4 \text{ } \Omega \cdot \text{cm}$  were formed by implantation and subsequent annealing of the samples which allowed one to fabricate InP membranes for sensor applications by using selective electrochemical etching techniques.

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