

Anodic oxidation of InP using a citric-acid-based solution

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An electrolyte for anodic oxidation of InP is described which takes into account the extreme sensitivity of its native oxide to water. It is an aqueous solution of citric acid buffered to nearly neutral pH and highly diluted by glycerine or ethylene glycol which can produce smooth native oxide films on InP. The breakdown field is about 3.5×10^6 V/cm. Nearly no shrinkage even at temperatures up to 590 °C has been observed indicating that the oxide is very densely packed.