



## Plasmonic Diamond Films And Related Methods

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**WARF: P170236US02**

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### The Invention

Methods of forming plasmonic diamond films are provided. In an embodiment, such a method comprises forming a first layer of diamond on a substrate; depositing a layer of a metal on a surface of the first layer of diamond to form an as-deposited layer of metal; exposing the as-deposited layer of metal to a plasma treatment to convert the as-deposited layer of metal to a plurality of discrete regions of the metal on the surface of the first layer of diamond; and forming a second layer of diamond on the plurality of discrete regions of metal to form the plasmonic diamond film comprising a plurality of plasmonic nanoparticles.

### Additional Information

#### For More Information About the Inventors

- [Robert Hamers](#)

#### Tech Fields

- [Materials & Chemicals : Synthesis](#)

For current licensing status, please contact Mark Staudt at [mstaudt@warf.org](mailto:mstaudt@warf.org) or 608-960-9845