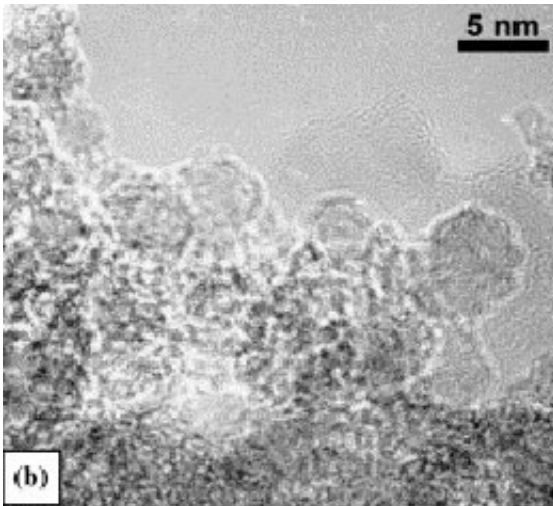


# In Brief: Medical applications of diamond particles and surfaces

May 9 2011

---



TEM image of nanodiamond particles

Scientists in the Argonne National Laboratory's Nanofabrication & Devices Group together with users from the University of North Carolina and North Carolina State University have written an invited review article describing recent advances using nanodiamond particles and diamond thin films for biomedical applications.

Diamond has unique mechanical, chemical, optical, and bio-compatible properties.

Methods for preparing synthetic diamond surfaces and particles are

described in this paper.

In addition, recent developments involving the use of diamond in prosthetics, sensing, imaging, and drug delivery promise significant improvements in the diagnosis and treatment of medical conditions over the coming years.

These developments suggest that [diamonds](#) may soon have greater impact in human health care.

**More information:** R.J. Narayan et al., "Medical applications of diamond particles and surfaces," *Materials Today*, 14, 154 (2011).  
[www.materialstoday.com/view/17...-particles-surfaces/](http://www.materialstoday.com/view/17...-particles-surfaces/)

### **Abstract**

Diamond has been considered for use in several medical applications due to its unique mechanical, chemical, optical, and biological properties. In this paper, methods for preparing synthetic diamond surfaces and particles are described. In addition, recent developments involving the use of diamond in prostheses, sensing, imaging, and drug delivery applications are reviewed. These developments suggest that diamond-containing structures will provide significant improvements in the diagnosis and treatment of medical conditions over the coming years.

Provided by Argonne National Laboratory

Citation: In Brief: Medical applications of diamond particles and surfaces (2011, May 9)  
retrieved 20 April 2024 from  
<https://phys.org/news/2011-05-medical-applications-diamond-particles-surfaces.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private

study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.