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**Research summary:**

I am interested in developing a full-field and tomographic x-ray research program using the unique capabilities associated with the design of the Hard X-ray Nanoprobe Beamline (<http://www.cnm.anl.gov/research/xray.html>).

**Awards:**

R&D 100 Award for the Hard X-ray Nanoprobe (2009)

**Selected Recent Publications:**

Sudheer Bandla, Robert P. Winarski, and Jay C. Hanan, Nanotomography of Polymer Nanocomposite Nanofibers, Imaging Methods for Novel Materials and Challenging Applications, Volume 3, Jin, H.; Sciammarella, C.; Furlong, C.; Yoshida, S. (Eds.), Chapter 26, The Society for Experimental Mechanics (2013).

R. P. Winarski, M. V. Holt, V. Rose, P. Fuesz, D. Carbaugh, C. Benson, D. Shu, D. Kline, G. B. Stephenson, I. McNulty and J. Maser, A Hard X-ray Nanoprobe Beamline for Nanoscale Microscopy, Journal of Synchrotron Radiation (19) November (2012).

J. L. Provis, A. Hajimohammadi, C. E. White, S. A. Bernal, R. J. Myers, R. P. Winarski, V. Rose, T. E. Proffen, A. Llobet, and J. S. J. van Deventer, Nanostructural characterization of geopolymers by advanced beamline techniques, Cement and Concrete Composites, in press, available online 27 July (2012).

V. Rose, T.Y. Chien, J. Hiller, D. Rosenmann, and R.P. Winarski. X-ray nanotomography of SiO<sub>2</sub>-coated Pt<sub>90</sub>Ir<sub>10</sub> tips with sub-micron conducting apex, Applied Physics Letters (99) 173102 (2011).

John L. Provis, Volker Rose, Robert P. Winarski, and Jannie S.J. van Deventer, Hard X-ray nanotomography of amorphous aluminosilicate cements, Scripta Materialia (65) 316–319 (2011).

**Patents:**

D. Shu, J. Maser, B. Lai, S. Vogt, M. Holt, C. Preissner, R. P. Winarski, and G. B. Stephenson, *Optomechanical Structure for a Multifunctional Hard X-ray Nanoprobe Instrument*, Patent Number 7331714, February 2008.