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Univ. of Texas at Austin

Optoelectronics with Oxides and Oxide Heterostructures

PNU-SKKU Quantum Matter Seminar Series 2020

9, DECEMBER, 2020

9:00AM – 10:30AM

▶ Webinar

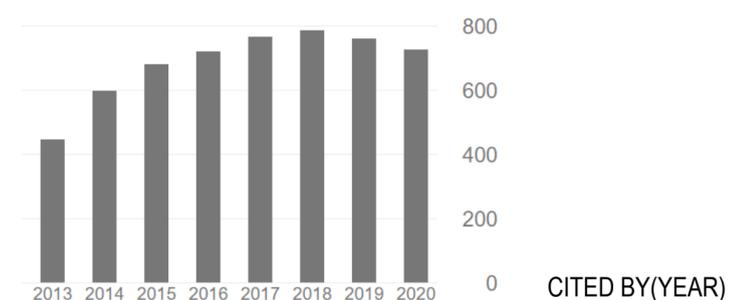
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BIO



Alex Demkov is a professor of Physics at The University of Texas at Austin. He received his Ph.D. in theoretical physics in 1995 from Arizona State University (ASU). In 1995-1997, he was a postdoctoral researcher at ASU. In 1997-2005, he was a principal staff scientist in Motorola's R&D organization providing theoretical support for the development of low- and high-k dielectric materials. In 2005, he joined the faculty of the Physics Department at the University of Texas at Austin. Prof. Demkov has published over 200 research papers and has been awarded nine U.S. patents. He has written, contributed to and edited several books. Demkov received the 2006 NSF CAREER award, 2011 IBM Faculty Award, and 2014 Excellence in Leadership Award of the American Vacuum Society. He is a Senior Member of IEEE and Fellow of the American Physical Society.

ARTICLES



- 🔍 **Electronic structure approach for complex silicas** 422(1995)
 AA Demkov, J Ortega, OF Sankey, MP Grumbach
 Physical Review B 52 (3), 1618
- 🔍 **Wide-band-gap Si in open fourfold-coordinated clathrate structures** 293(1994)
 GB Adams, M O'Keeffe, AA Demkov, OF Sankey, YM Huang
 Physical Review B 49 (12), 8048
- 🔍 **A silicon-based photocathode for water reduction with an epitaxial SrTiO₃ protection layer and a nanostructured catalyst** 286(2015)
 L Ji, MD McDaniel, S Wang, AB Posadas, X Li, H Huang, JC Lee, ...
 Nature nanotechnology 10 (1), 84-90
- 🔍 **Further developments in the local-orbital density-functional-theory tight-binding method** 273(2001)
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 Physical Review B 64 (19), 195103
- 🔍 **Charge origin and localization at the n-type SrTiO₃/LaAlO₃ interface** 242(2008)
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 Physical Review B 78 (19), 193104