

DAVID C. BELL

Ph.D., F.R.M.S.

Gordon McKay Professor of Applied Physics, Professor of the Practice in Electron Microscopy
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Director Imaging and Analysis Group, Center for Nanoscale Systems
Professor at the Harvard University Extension School

Field of Research

Atom-Resolution Aberration-Corrected Electron Microscopy

Physics of Nanostructures, Quantum Materials and Catalysts

EDUCATION

Post. Doc. Materials Science & Physics, NSF Postdoctoral Associate, Massachusetts Institute of Technology 1997-1999

Ph.D. Physics, University of Melbourne, Australia, 1997

B.Sc. (Hons). *Honors in Physics*, University of Melbourne, Australia, 1991

B.Sc. (Physics, Genetics, Mathematics), University of Melbourne, Australia, 1990

PROFESSIONAL EXPERIENCE

2011 – current	Gordon McKay Professor of Applied Physics, Professor of the Practice in Electron Microscopy, Harvard University
2009 – current	Professor, Harvard University Extension School, Harvard University
2007 – current	Manager, Imaging and Analysis, Center for Nanoscale Systems, Harvard University
2003 – 2011	Lecturer in Applied Physics, School of Engineering and Applied Science, Harvard University
2003 – 2007	Principal Scientist, CIMS, Harvard University
2000 – 2002	Research Faculty, Principal Investigator, University of Minnesota
1999 – 2000	Research Associate, Massachusetts Institute of Technology

HONORS AND AFFILIATIONS

2013	Honorary Professor, EE Dept, University of Melbourne, Australia.
2012-	Board of Review, DOE Basic Energy Sciences
2011	JL Waters Award “For contributions to applied technology”
2009	Institute of Physics Nanotechweb.org: best of 2009
2008-	Advisory Board, ZS Genetics
2008-	Board of Advisors, Government of South Africa’s National Research Foundation (NRF)
2007	Visiting Scientist, Department of Materials, Oxford University, UK
2005	Elected Fellow of the Royal Microscopical Society, U.K. (F.R.M.S.)
1996	National Science Foundation, Postdoctoral Associate (NSFPA)
1996-	Member, Microscopy Society of America (MSA)
1996-	Member of the Materials Research Society (MRS).
1995	Australian Postgraduate Research Award (APRA)

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CURRENT/RECENT FUNDING

INTEGRATED MESOSCALE ARCHITECTURES FOR SUSTAINABLE CATALYSIS (IMASC) an Energy Frontier Research Center (EFRC)

Project dates: 8/1/2014-7/31/2018

Funding Agency: Department of Energy Office of Science

Award Number: DE-SC0012573

Center for Integrated Quantum Materials an NSF Science and Technology Center

Proposed Award Dates: 11/1/2013-6/30/2017

Funding Agency: National Science Foundation

Award Number: DMR 1231319

Materials World Network: Pan-American Network for Electron Microscopy and Spectroscopy of Nanomaterials

Funding Agency: National Science Foundation

Proposed Award Dates 07/01/2010-07/01/2014 (extended)

Award Number NSF 1108382

Acquisition of a 3D Tomographic Atom-Probe Microscope

Funding Agency: National Science Foundation

Award Number NSF MRI 1040243

Proposed Award Dates 10/01/10-10/01/13

PUBLICATIONS

1. F. Von Cube, J. Niegemann, S. Irsen, D. C. Bell, and S. Linden, "Angular-resolved electron energy loss spectroscopy on a split-ring resonator", *Phys. Rev. B* 89, 115434 (2014).
2. David C. Bell, Max Mankin, Robert W. Day, Natasha Erdman, "Successful application of Low Voltage Electron Microscopy to practical materials problems", *Ultramicroscopy*, March (2014), DOI: 10.1016/j.ultramic.2014.03.005.
3. Branko Zujic, David C. Bell, Maria Flytzani-Stephanopoulos, Activation of carbon-supported platinum catalysts by sodium for the low-temperature water-gas shift reaction, *Applied Catalysis B: Environmental*, Volume 144, January (2014), Pages 243-251
4. *Low Voltage Electron Microscopy: Principals and Application*, David C. Bell and Natasha Erdman, John Wiley (2013)
5. David C. Bell, Chris J. Russo and Dmitry Kolmykov, 40 keV Atomic Resolution TEM, *Ultramicroscopy*. 114, pp 31-37 (2012)
6. Yanping Zhai, Danny Pierre, Howard Saltsburg, Rui Si, Weiling Deng, Peter Ferrin, Anand U. Nilekar, Guowen Peng, Jeffrey A. Herron, Manos Mavrikakis, David C. Bell, Maria Flytzani-Stephanopoulos, "Alkali-stabilized, active Pt-OH_x species for the water-gas shift reaction", *Science*, 329, (2010) pp. 1633-1636
7. R. Asmatulu, A. Karthikeyan, D.C. Bell, S. Ramanathan, and M.J. Aziz "Synthesis and Variable Temperature Electrical Conductivity Studies of Highly Ordered TiO₂ Nanotubes", *J. Mat. Sci.* 44 (17), (2009) pp. 4613-4616
8. Thomas J. Kempa, James F. Cahoon, Sun-Kyung Kim, Robert W. Day, David C. Bell, Hong-Gyu Park, and Charles M. Lieber, "Coaxial multishell nanowires with high-quality electronic interfaces and tunable optical cavities for ultrathin photovoltaics", *PNAS*, 109 (5), (2012) 1407-1412