

**Ross Coffin Purdy Award  
History of Awardees**

| Date Elevated: | Name(s)   | Awarded for:   |
|----------------|---|--|
| 2023           | Alex C. Hannon, Shuchi Vaishnav, Oliver L. G. Alderman, Paul A. Bingham   | "The structure of sodium silicate glass from neutron diffraction and modeling of oxygen-oxygen correlations"; <i>Journal of the American Ceramic Society</i> ; 2021, 104, 6155-6171  |
| 2022           | Kurt Terrani, Brian Jolly, Michael Trammell   | "3D printing of high-purity silicon carbide", <i>Journal of the American Ceramic Society</i> ; 2020, 103(3) 1575-1581  |
| 2021           | Beilin Ye, Tongqi Wen, Kehan Huang, Cai Zhuang Wang, Yanhui Chu   | "First principles study, fabrication, and characterization of (Hf <sub>0.2</sub> Zr <sub>0.2</sub> Ta <sub>0.2</sub> Nb <sub>0.2</sub> Ti <sub>0.2</sub> )C high entropy ceramic" <i>Journal of the American Ceramic Society</i> , 2019 107(7) 4344-4352 |
| 2020           | Fei Li, Dabin Lin, Zibin Chen, Zhenxiang Cheng, Jianli Wang, ChunChun Li, Zhuo Xu, Qianwei Huang, Xiaozhou Liao, Long-Qing Chen, Thomas R. Shrout, Shujun Zhang | "Ultra-high piezoelectricity in ferroelectric ceramics by design", <i>Nature Materials</i> , 17 (2018) 349-354   |
| 2019           | Wei Ji, Barnaby Parker, Simone Falco, Jinyong Zhang, Zhengyi Fu, Richard Todd   | Ultra-fast firing: Effect of heating rate on sintering of 3YSZ, with and without an electric field, <i>Journal of the European Ceramic Society</i> 2017; Volume: 37, Issue: 6; 2547-2551   |
| 2018           | Nikolai Tsvetkov, Qiyang Lu, Lixin Sun, Ethan J. Crumlin and Bilge Yildiz   | Improved chemical and electrochemical stability of pervskite oxides with less reducible cations at the surface<br><i>Nature Materials</i> vol 15 pages 1010-1016 (2016)  |
| 2017           | Chuanheng Duan, Jianhua Tong, Meng Shang, Stefan Nikodemski, Michael Sanders, Sandrine Ricote, Ryan O'Hayre and Ali Almansoori                                  | Readily Processed Protonic Ceramic Fuel Cells with High Performance at Low Temperatures<br><i>Science</i> 2015 • VOL 349 Issue 6254  |
| 2016           | Prabeer Barpanda, Gosuke Oyama, Shin-ichi Nishimura, Sai-Cheong Chung, Atsuo Yamada   | A 3.8-V earth-abundant sodium battery electrode, <i>Nature Communications</i> , 5: 4358, 2014  |
| 2015           | Rémy Boulesteix, Alexandre Maître, Lucie Chrétien, Yoël Rabinovitch and Christian Sallé   | Microstructural Evolution During Vacuum Sintering of Yttrium Aluminum Garnet Transparent Ceramics: Toward the Origin of Residual Porosity Affecting the Transparency, <i>Journal of the American Ceramic Society</i> , 98 [6] 1724-1734 (2015)           |
| 2014           | James M. Rondinelli, Steven J. May, and John W. Freeland  | Control of octahedral connectivity in perovskite oxide heterostructures: an emerging route to multifunctional materials discovery, <i>MRS Bulletin</i> , 37, 261-270 (2012)  |
| 2013           | Michael Naguib, Olha Mashtalir, Joshua Carle, Volker Presser, Jun Lu, Lars Hultman, Yury Gogotsi, and Michel W. Barsoum   | Two-Dimensional Transition Metal Carbides, <i>ACS Nano</i> , Vol. 6, No. 2., 1322-1331 (2012)  |
| 2012           | Not Awarded for 2012  |  |
| 2011           | Daniele Pergolesi, Emiliana Fabbri, Alessandra D'Epifanio, Elisabetta Di Bartolomeo, Antonello Tebano, Simone Sanna, Silvia Licoccia,                           | High proton conduction in grain-boundary-free yttrium-doped barium zirconate films grown by pulsed laser deposition, <i>Nature Materials</i> , 9 (2010) 846-852  |
| 2010           | Lei Yang, Shizhong Wang, Kevin Blinn, Mingfei Liu, Ze Liu, Zhe Cheng, Meilin Liu  | Enhanced Sulfur and Coking Tolerance of a Mixed Ion Conductor for SOFCs: BaZr <sub>0.1</sub> Ce <sub>0.7</sub> Y <sub>0.2-x</sub> Yb <sub>x</sub> O <sub>3-δ</sub> , 2 October 2009 Vol. 326 <i>SCIENCE</i> , pp. 126-129.                               |
| 2009           | Yong Qin, Xudong Wang, & Zhong Lin Wang   | Microfibre-nanowire hybrid structure for energy scavenging, <i>Nature</i> , Vol 451, 14 February 2008, pg 809-814.   |
| 2008           | Yukio Sato, Takahisa Yamamoto, Yuichi Ikuhara   | Atomic Structures and Electrical Properties of ZnO Grain Boundaries, <i>J. Am. Ceram. Soc.</i> , 90 [2] (2007) 337.  |
| 2007           | Lorenz Holzer, Beat Münch, Markus Wegmann, Philippe Gasser, Robert J. Flatt   | FIB-Nanotomography of Particulate Systems—Part I: Particle Shape and Topology of Interfaces, <i>J. Am. Ceram. Soc.</i> , 89 [8] 2577–2585 (2006).  |
| 2006           | Chuanping Li and Mufit Akinc  | Role of Bound Water on the Viscosity of Nanometric Alumina Suspensions, <i>J. Am. Ceram. Soc.</i> , 88[6] 1448-1454 (2005).  |
| 2005           | Xin Guo, Wilfried Sigle and Joachim Maier   | Blocking Grain Boundaries in Yttria-Doped and Undoped Ceria Ceramics of High Purity, <i>J. Am. Ceram. Soc.</i> , 86[1]77-87(2003).   |
| 2004           | Andrew D'Souza and Carlo G. Pantano   | Hydroxylation and Dehydroxylation Behavior of Silica Glass Fracture Surfaces, <i>J. Am. Ceram. Soc.</i> , 85 [9], 1499-1504 - (2002).  |
| 2003           | Dawn Bonnell and Sergei Kalinin   | Scanning Impedance Microscopy of Electroactive Interfaces <i>Applied Physics Letters</i> , 78 [9] 1306-1308 - (2001).  |

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| <b>Date Elevated:</b> | <b>Name(s)</b>   | <b>Awarded for:</b>  |
|-----------------------|--|--|
| 2002                  | William W. Mullins*  |  |
| 2002                  | Gregory S. Rohrer  |  |
| 2001                  | Yet-Ming Chiang and Harold Ackler  | Effect of Initial Microstructure on Final Intergranular Phase Distribution in Liquid-Phase Sintered Ceramics, <i>J. AM. Ceram. Soc.</i> 82[1]183-89 (1999)                         |
| 2000                  | David S. Wilkinson   | Creep Mechanisms in Multiphase Ceramic Materials, <i>J. AM. Ceram Soc.</i> 81 [2] 275-99 (1998)  |
| 1999                  | S. K. Lee, S. Wuttiphan and B.R. Lawn  | Role of Microstructure in Hertzian Contact Damage in Silicon Nitride: I, Mechanical Characterization   |
| 1998                  | Martin P. Harmer and Laura C. Stearns  | Particle-Inhibited Grain Growth in Al <sub>2</sub> O <sub>3</sub> -SiC: Parts I and II   |
| 1997                  | Peter Greil  | Active Filler-Controlled Pyrolysis of Pre ceramic Polymers   |
| 1996                  | Hans J. Schmutzler, Michael M. Antony, and Kenneth H. Sandhage               | A Novel Reaction Path to BaTiO <sub>3</sub> by the Oxidation of a Solid Metallic Precursor   |
| 1995                  | Jackie Y. Ying, Jay B. Benziger, Alexandra Navrotsky                         | Structural Evolution of Colloidal Silica in Gels to Glass  |
| 1994                  | I-Wei Chen, Shih-Yu Liu  | Fatigue Deformation Mechanisms in Zirconia Ceramics  |
| 1993                  | Kuan-Zong Fung, Anil V. Virkar   | Phase Stability, Phase Transformation Kinetics, and Conductivity of Y <sub>2</sub> O <sub>3</sub> -Bi <sub>2</sub> O <sub>3</sub> Solid Electrolytes Containing Aliovalent Dopants |
| 1992                  | Subra Suresh, Toshio Nakamura, Yehoshua Yeshurun, Kwanho Yang, Jacques Duffy | Tensile Fracture Toughness of Ceramic Materials: Effects of Dynamic Loading and Elevated Temperatures  |
| 1991                  | Rowland M. Cannon, W. Craig Carter   | Interplay of Sintering Microstructures, Driving Forces, and Mass Transport Mechanisms  |
| 1990                  | Paul F. Becher, Chun-Hway Hseuh, Peter Angelini, Terry N. Tiegs              | Toughening Behavior in Whisker-Reinforced Ceramic Matrix Composites  |
| 1989                  | D.B. Marshall, W.C. Oliver   | Measurement of Interfacial Mechanical Properties in Fiber Reinforced Ceramic Composites  |
| 1988                  | J.G. Bednorz, K.A. Muller  | Possible High T <sub>c</sub> Superconductivity in the Ba-La-Cu-O System  |
| 1987                  | T.A. Michalske, E.R. Fuller, Jr.   |  |
| 1986                  | G.W. Scherer   |  |
| 1985                  | Yao Xi, H. McKinstry and L.E. Cross  |  |
| 1984                  | P.J. Lemaire, H. Kent Bowen  |  |
| 1983                  | William H. Rhodes  |  |
| 1982                  | David R. Clarke, Fred F. Lange   |  |
| 1981                  | Arthur H. Heuer  |  |
| 1980                  | Man F. Yan, David W. Johnson, Jr.  |  |
| 1979                  | Subhash H. Risbud, Joseph A. Pask  |  |
| 1978                  | Charles D. Greskovich, Joseph H. Rosolowski                                  |  |
| 1977                  | Marcus B. Borom, Robert H. Doremus, Anna M. Turkalo                          |  |
| 1976                  | David E. Carlson   |  |
| 1975                  | Anthony G. Evans, M. Linzer  |  |
| 1974                  | Stephen C. Carniglia   |  |
| 1973                  | O.S. Narayanaswamy   |  |
| 1972                  | Robert L. Coble  |  |
| 1971                  | Sheldon M. Wiederhorn  |  |
| 1970                  | Robert E. Jech, Dennis W. Readey   |  |
| 1969                  | Norman M. Tallan, Walter C. Tripp, Robert W. Vest                            |  |
| 1968                  | Orson L. Anderson, Naohiro Soga  |  |

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|-----------------------|--|---------------------|
| 1967                  | Edmund M. Passmore, Richard M. Spriggs, Thomas Vasilos |                     |
| 1966                  | Robert H. Insley, Virgil J. Barczak                    |                     |
| 1965                  | Robert J. Stokes, Choh Hsien Li                        |                     |
| 1964                  | Samuel S. Kistler                                      |                     |
| 1963                  | Leonard G. Grossman, Richard M. Fulrath                |                     |
| 1962                  | Robert Scheuplein, Peter Gibbs                         |                     |
| 1961                  | Frederick P. Knudsen                                   |                     |
| 1960                  | Stanley D. Stookey                                     |                     |
| 1959                  | Arnulf Muan  |                     |
| 1958                  | Robert Gardon  |                     |
| 1957                  | R.B. Sosman  |                     |
| 1956                  | None given   |                     |
| 1955                  | None given   |                     |
| 1954                  | W.D. Kingery, J.F. Wygant                              |                     |
| 1953                  | Floyd A. Hummel  |                     |
| 1952                  | None given   |                     |
| 1951                  | Ralph K. Hursh   |                     |
| 1950                  | Ivan Peyches   |                     |
| 1949                  | Flemmon P. Hall, Herbert Insley                        |                     |