

Announcement

## 2012 Acta Materialia Gold Medal Award



The winner of the 2012 Acta Materialia Gold Medal is Professor Terence G. Langdon, currently the William E. Leonhard Professor of Engineering at the University of Southern California and Research Professor of Materials Science at the University of Southampton. Langdon was born and educated in the West Country in south-western England. He received a B.Sc. degree in Physics from the University of Bristol and a Ph.D. degree in Physical Metallurgy from Imperial College, University of London. Following post-doctoral appointments at the University of California at Berkeley, the University of Cambridge and the University of British Columbia, he was appointed Associate Professor of Materials Science and Mechanical Engineering at the University of Southern California in 1971. He was promoted to Professor in 1976 and in 2003 he was appointed the William E. Leonhard Professor of Engineering. Currently he is a member of three departments at USC: Aerospace and Mechanical Engineering, Chemical Engineering and Materials Science and Earth Sciences. He was also appointed Research Professor of Materials Science in the School of Engineering Sciences at the University of Southampton in the UK in 2005.

Langdon has held numerous concurrent appointments including Visiting Professor, University of Melbourne, Australia (1977–1978), Visiting Professor, Universidad Nacional Autónoma de Mexico (1981), Visiting Scientist, Risø National Laboratory, Denmark (1984), JSPS Senior Fellow, Kyushu University, Japan (1991), Visiting Senior

Fellow, International Center for Advanced Studies, Nizhny Novgorod, Russia (1997) and Visiting Professor, Danish Technical University (1998).

Professor Langdon was elected a Foreign Member of The Academy of Sciences of the Bashkortostan Republic, Russian Federation, in 1994, a Fellow of the Royal Academy of Engineering in 2002 and a Fellow of the European Academy of Sciences in 2008. He received the degree of Doctor *honoris causa* from The Russian Academy of Sciences in 2003, the Blaise Pascal Medal in Material Science from the European Academy of Sciences in 2008, the Lee Hsun Award and Lecture from the Chinese Academy of Sciences in 2009 and the Honorary Medal “De Scientia et Humanitate Optime Meritis” from the Academy of Sciences of the Czech Republic in 2009.

Langdon is a Fellow of The Institute of Physics (1972), Fellow of The Institute of Materials, Minerals and Mining (1975), Fellow of The American Ceramic Society (1981), Fellow of ASM International (1991), Fellow of The Minerals, Metals and Materials Society (TMS) (2005), Honorary Member of The Japan Institute of Metals (2005), Fellow of The American Association for the Advancement of Science (2009) and Fellow of The Materials Research Society (2011). He was awarded the degree of D.Sc. in Physics by the University of Bristol in 1980 for his published research in the area of high temperature creep. He has received several awards including an Iketani Science and Technology Fellowship from the Iketani Foundation in Japan (1995),

the Henry Marion Howe Medal from ASM International (2000), a JSPS Senior Fellowship from the Japan Society for the Promotion of Science (2001), the Structural Materials Division Distinguished Scientist/Engineer Award from TMS (2005), the Sômiya Award from the International Union of Materials Research Societies (2005), the THERMEC Distinguished Award from the THERMEC International Conferences (2006), the Albert Sauveur Achievement Award from ASM International (2007), the Bulk Nanostructured Materials Honours Award from the Russian Congress on Nanotechnologies (2009), the Memorial Medal of the Faculty of Mathematics and Physics of Charles University in Prague (2009) and the NanoSPD Achievement Award from the NanoSPD International Conferences (2011).

Professor Langdon's doctoral thesis was on the role of grain boundary sliding in the creep of metals. He continued working in this area after receiving his Ph.D. and in the 1970s, on appointment to a faculty position at USC, he extended his interests to include superplasticity. He was a major contributor in the superplasticity field in the 1980s and early 1990s including serving for a number of years as Chairman of the International Superplasticity Committee. Following an exploratory visit to Russia in 1988, he was the first outside of Russia to publish research on the processing and properties of ultrafine-grained metals fabricated through the application of severe plastic deformation (SPD). The first western paper in this area (Wang et al. *J Mater Res* 1993;8:2810) has now received a total of 135 citations. His interest in SPD processing led to his founding and membership of the International NanoSPD Steering Committee which continues to serve the NanoSPD community by organizing triennial international conferences (most recently NanoSPD5 in Nanjing, China, in March 2011).

Langdon has written more than 700 papers for peer-reviewed journals which are listed on the ISI Web of Science. During the period 1981–2001 he was ranked by ISI as #3 world-wide for the total numbers of High Impact Papers in Materials Science, where High Impact papers are defined as the 200 most cited papers in Materials Science

for each separate year. During the period 1996–2006 he was ranked by ISI as #2 world-wide for Materials Science based on the total numbers of citations received for published papers. He is listed on the ISI Highly Cited website ([www.ISIHighlyCited.com](http://www.ISIHighlyCited.com)) under Materials Science and currently he has an h-index of 81 (which means that 81 papers each have at least 81 citations). His papers have received more than 25,000 citations to date with an average of >36 citations for each published paper. A listing of publications is given at <http://www.researcherid.com/rid/B-1487-2008>. Langdon has published extensively in *Acta Materialia* and its preceding journals. He published 27 papers in *Acta Metallurgica* which received a total of 2225 citations corresponding to 82 citations/paper, he published 11 papers in *Acta Metallurgica et Materialia* which received 666 citations corresponding to 60 citations/paper and to date he has published 42 papers in *Acta Materialia* which have received 4060 citations corresponding to 96 citations/paper.

The Acta Materialia Gold Medal is awarded annually by the Board of Governors of Acta Materialia, Inc., with partial financial support from Elsevier, Ltd. Nominees are solicited each year from the Cooperating Societies and Sponsoring Societies of Acta Materialia, Inc., based on demonstrated ability and leadership in materials research. The candidates are placed on a ballot for the selection committee (a panel of international judges who serve for three-year terms). A preferential ballot is then conducted among the judges and the candidate with the most points is awarded the Gold Medal. The Award consists of the gold medal, an inscribed certificate, and a check for a sum of money that constitutes the Board's contribution to the award winner.

The award ceremony and an Acta Materialia Gold Medal Symposium will be held as part of the E-MRS Fall Meeting in Warsaw, Poland, on 17–21 September, 2012.

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