

### The Sapphire Prize Finalists

- December 2011 The effect of carbon nanotubes on the fracture toughness and fatigue performance of a thermosetting epoxy polymer  
T.H. Hsieh, A.J. Kinloch, A.C. Taylor, I.A. Kinloch  
<https://rdcu.be/b0b8n>  
J Mater Sci 46:7525
- November 2011 Giant carbon solubility in Au nanoparticles  
Eli A. Sutter, Peter W. Sutter  
<https://rdcu.be/b0b8t>  
J Mater Sci 46(22) 7090–7097
- October 2011 Growth of graphene and graphite nanocrystals from a molten phase  
Shaahin Amini, Haamun Kalaantari, Javier Garay, Alexander A. Balandin, Reza Abbaschian  
<https://rdcu.be/b0b8B>  
J Mater Sci 46(19) 6255–6263
- September 2011 Grain boundary energy anisotropy: a review  
Gregory S. Rohrer  
<https://rdcu.be/b0b8K>  
J Mater Sci 46(18) 5881–5895
- August 2011 Overview of transient liquid phase and partial transient liquid phase bonding  
Grant O. Cook III, Carl D. Sorensen  
Open Access  
J Mater Sci 46, 5305–5323
- July 2011 A1-L12 interfacial free energies from data on coarsening in five binary Ni alloys, informed by thermodynamic phase diagram assessments  
Alan J. Ardell  
Open Access  
J Mater Sci 46(14) 4832–4849
- June 2011 Nanofibre fabrication in a temperature and humidity controlled environment for improved fibre consistency  
Open Access  
Oliver Hardick, Bob Stevens, Daniel G. Bracewell  
J Mater Sci 46, 3890–3898
- May 2011 Puncturing of soft gels with multi-tip needles  
Susmita Das, Animangsu Ghatak  
<https://rdcu.be/b0b88>  
J Mater Sci 46, 2895–2904
- April 2011 Recent developments in the preparation, characterization and applications of glass- and glass-ceramic-to-metal seals and coatings  
I. W. Donald, P. M. Mallinson, B. L. Metcalfe, L. A. Gerrard, J. A. Fernie  
Open Access  
J Mater Sci 46, 1975–2000
- March 2011 Influence of size-controlled TiO<sub>2</sub> nanotubes fabricated by low-temperature chemical synthesis on dye-sensitized solar cell properties  
Jang-Yul Kim, Tohru Sekino, Shun-Ichiro Tanaka  
<https://rdcu.be/b0b9f>  
J Mater Sci 46(6) 1749–1757
- February 2011 Review of the anatase to rutile phase transformation  
Dorian A. H. Hanaor, Charles C. Sorrell  
<https://rdcu.be/b0b9q>  
J Mater Sci 46, 855–874
- January 2011 Connecting the macro- and microstrain responses in technical porous ceramics: modeling and experimental validations  
Giovanni Bruno, Alexander M. Efremov, Andreyi N. Levandovskyi, Bjorn Clausen  
<https://rdcu.be/b0b9y>  
J Mater Sci 46, 161–173