

## Top 25 Hottest Articles

Materials Science > Scripta Materialia  
January to March 2011

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1. **A novel approach for synthesis of TiO<sub>2</sub>-graphene nanocomposites and their photoelectrical properties**  
*Scripta Materialia*, Volume 64, Issue 7, April 2011, Pages 621-624  
Zou, F.; Yu, Y.; Cao, N.; Wu, L.; Zhi, J.
2. **Formation of nanoporous Au by dealloying AuCu thin films in HNO<sub>3</sub>**  
*Scripta Materialia*, Volume 64, Issue 9, May 2011, Pages 856-859  
Morrish, R.; Dorame, K.; Muscat, A.J.
3. **Electrochemical electrodes of graphene-based carbon nanotubes grown by chemical vapor deposition**  
*Scripta Materialia*, Volume 64, Issue 7, April 2011, Pages 601-604  
Choi, H.; Kim, H.; Hwang, S.; Kang, M.; Jung, D.W.; Jeon, M.  
[Cited by SciVerse Scopus \(1\)](#)
4. **Work softening in nanocrystalline materials induced by dislocation annihilation**  
*Scripta Materialia*, Volume 64, Issue 9, May 2011, Pages 876-879  
Ungar, T.; Li, L.; Tichy, G.; Pantleon, W.; Choo, H.; Liaw, P.K.
5. **Twinning mechanism via synchronized activation of partial dislocations in face-centered-cubic materials**  
*Scripta Materialia*, Volume 64, Issue 9, May 2011, Pages 852-855  
Li, B.Q.; Li, B.; Wang, Y.B.; Sui, M.L.; Ma, E.
6. **Basal-plane stacking-fault energies of Mg: A first-principles study of Li- and Al-alloying effects**  
*Scripta Materialia*, Volume 64, Issue 8, April 2011, Pages 693-696  
Han, J.; Su, X.M.; Jin, Z.H.; Zhu, Y.T.
7. **High-pressure torsion of pure magnesium: Evolution of mechanical properties, microstructures and hydrogen storage capacity with equivalent strain**  
*Scripta Materialia*, Volume 64, Issue 9, May 2011, Pages 880-883  
Edalati, K.; Yamamoto, A.; Horita, Z.; Ishihara, T.
8. **In situ TEM observations of unusual nanocrystallization in a Ti-based bulk metallic glass**  
*Scripta Materialia*, Volume 64, Issue 8, April 2011, Pages 701-704  
Yan, M.; Wang, D.J.; Shen, J.; Qian, M.
9. **Indentation size effect in bulk metallic glass**  
*Scripta Materialia*, Volume 64, Issue 8, April 2011, Pages 753-756  
Jang, J.I.; Yoo, B.G.; Kim, Y.J.; Oh, J.H.; Choi, I.C.; Bei, H.
10. **Effect of texture on the mechanical behavior of ultrafine grained magnesium alloy**  
*Scripta Materialia*, Volume 64, Issue 6, March 2011, Pages 580-583  
Yuan, W.; Mishra, R.S.; Carlson, B.; Mishra, R.K.; Verma, R.; Kubic, R.
11. **Metallic glasses as structural materials**  
*Scripta Materialia*, Volume 54, Issue 3, February 2006, Pages 321-326  
Ashby, M.F.; Greer, A.L.  
[Cited by SciVerse Scopus \(216\)](#)
12. **A microstructure-based model of the deformation mechanisms and flow stress during elevated-temperature straining of a magnesium alloy**  
*Scripta Materialia*, Volume 64, Issue 10, May 2011, Pages 931-934  
Cipoletti, D.E.; Bower, A.F.; Krajewski, P.E.
13. **In situ TEM compression testing of Mg and Mg-0.2wt.% Ce single crystals**  
*Scripta Materialia*, Volume 64, Issue 3, February 2011, Pages 292-295  
Ye, J.; Mishra, R.K.; Sachdev, A.K.; Minor, A.M.
14. **Twinning and double twinning upon compression of prismatic textures in an AM30 magnesium alloy**  
*Scripta Materialia*, Volume 64, Issue 9, May 2011, Pages 813-816  
Ma, Q.; El Kadiri, H.; Oppedal, A.L.; Baird, J.C.; Horstemeyer, M.F.; Cherkaoui, M.
15. **A universal scaling of planar fault energy barriers in face-centered cubic metals**  
*Scripta Materialia*, Volume 64, Issue 7, April 2011, Pages 605-608  
Jin, Z.H.; Dunham, S.T.; Gleiter, H.; Hahn, H.; Gumbsch, P.
16. **Fabrication and comparative optical characterization of n-ZnO nanostructures (nanowalls, nanorods, nanoflowers and nanotubes)/p-GaN white-light-emitting diodes**  
*Scripta Materialia*, Volume 64, Issue 8, April 2011, Pages 697-700  
Alvi, N.H.; Usman Ali, S.M.; Hussain, S.; Nur, O.; Willander, M.
17. **Mapping the dislocation sub-structure of deformed polycrystalline Ni by scanning microbeam diffraction topography**  
*Scripta Materialia*, Volume 64, Issue 9, May 2011, Pages 884-887  
Abbey, B.; Hofmann, F.; Belnoue, J.; Rack, A.; Tucoulou, R.; Hughes, G.; Eve, S.; Korsunsky, A.M.
18. **Improved mechanical properties of polymer nanocomposites incorporating graphene-like BN: Dependence on the number of BN layers**  
*Scripta Materialia*, Volume 64, Issue 6, March 2011, Pages 592-595  
Kiran, M.S.R.N.; Raidongia, K.; Ramamurty, U.; Rao, C.N.R.
19. **Enhanced mechanical properties of a hot stamped advanced high-strength steel treated by quenching and partitioning process**  
*Scripta Materialia*, Volume 64, Issue 8, April 2011, Pages 749-752  
Liu, H.; Lu, X.; Jin, X.; Dong, H.; Shi, J.
20. **Carbon diffusivity in multi-component austenite**  
*Scripta Materialia*, Volume 64, Issue 9, May 2011, Pages 805-808  
Lee, S.J.; Matlock, D.K.; Van Tyne, C.J.
21. **Shape rheocasting of high purity aluminium**  
*Scripta Materialia*, Volume 64, Issue 6, March 2011, Pages 479-482  
Curie, U.A.; Moller, H.; Wilkins, J.D.  
[Cited by SciVerse Scopus \(1\)](#)
22. **Microstructure and mechanical properties of ZrB<sub>2</sub>-SiC-ZrO<sub>2</sub> ceramic**  
*Scripta Materialia*, Volume 64, Issue 9, May 2011, Pages 872-875  
Jia, L.; Xinghong, Z.; Zhi, W.; Wenbo, H.
23. **Cu<sub>2</sub>O/n-ZnO nanowire solar cells on ZnO:Ga/glass templates**  
*Scripta Materialia*, Volume 57, Issue 1, July 2007, Pages 53-56  
Hsueh, T.J.; Hsu, C.L.; Chang, S.J.; Guo, P.W.; Hsieh, J.H.; Chen, I.C.  
[Cited by SciVerse Scopus \(34\)](#)
24. **Development of high-strength magnesium alloys via combined processes of extrusion, rolling and ageing**  
*Scripta Materialia*, Volume 64, Issue 10, May 2011, Pages 950-953  
Li, R.G.; Nie, J.F.; Huang, G.J.; Xin, Y.C.; Liu, Q.
25. **Mechanism of grain refinement of Mg-Al alloys by SiC inoculation**  
*Scripta Materialia*, Volume 64, Issue 8, April 2011, Pages 793-796  
Huang, Y.; Kainer, K.U.; Hort, N.