

Jianyu Huang

Publications = 130; h-factor = 30; citations > 2800

Nanoscience Related Publications

(Selected journal publications)

2009

- 130 J.Y. Huang, F. Ding, B.I. Yakobson, P. Lu, Q. Liang, and J. Li
In-situ Observation of Graphene Sublimation and Multi-Layer Edge Reconstructions
PNAS 106, 10103-10108 (2009) (Highlighted in **U. Penn Press Release, Science Daily, e! Science News, Eurekalert, Nano Werk**)
- 129 Feng Ding, Jian Yu Huang, B.I. Yakobson
Comment on "Mechanism for superelongation of carbon nanotubes at high temperatures"
Phys. Rev. Lett. 103, 039601 (2009)
- 128 N.W. Moore, J. Luo, J.Y. Huang, S. X. Mao, and J.E. Houston
Superplastic Nanowires Pulled from the Surface of Common Salt
Nano Lett. 9, 2295-2299 (2009) (Highlighted in **New York Times, Science News, Chemistry World, MRS Materials News, Sandia Lab. News, New Scientist**)
- 127 T. Westover, R. Jones, J.Y. Huang, G. Wang, E. Lai, and A.A. Talin
Photoluminescence, Thermal Transport and Breakdown in Joule-Heated GaN Nanowires
Nano Lett. 9, 257-263 (2009)
- 126 Z. Zhang, B.Q. Han, J.Y. Huang, Y.H. Han, Y. Zhou, K. Kakegawa, and E.J. Lavernia
Mechanical Behavior of Cryomilled Ni Superalloy by Spark Plasma Sintering
Metallur. Mater. Trans. A, 40A, 2023-2029 (2009)
- 125 Yang Lu, Jian Yu Huang, Chao Wang, Shouheng Sun, Jun Lou
Cold welding of ultrathin gold nanowires (submitted)
- 124 Liang Qi, Jian Yu Huang, Ji Feng, Ju Li
Formation of Graphene Bilayer Edge from the Reaction of Two Monolayer Edges
submitted
- 123 Ji Feng, Liang Qi, Jian Yu Huang and Ju Li
Electronic properties of graphene bilayer edges
submitted
- 122 Junhang Luo, Jian Yu Huang, Erik Bitzek, He Zheng, Limin Tong, Qing Yang, Ju Li, Scott X. Mao
Silica glass nanowires are ductile
submitted
- 121 Yuanbing Mao, Xia Guo, Jian Y. Huang, Kang L. Wang, and Jane P. Chang
Luminescent Nanocrystals with A2B2O7 Composition Synthesized by a Kinetically Modified Molten Salt Method
J. Phys. Chem. C 113, 1204-1208 (2009)
- 120 Z. Zhang, T.M. Nenoff, J.Y. Huang, D. T. Berry, P.P. Provencio,
Room Temperature Synthesis of Thermally Immiscible AgNi Nanoalloys
J. Phys. Chem. C 113, 1155-1159 (2009)
- 119 Yuanbing Mao, Thai Tran, Xia Guo, Jian Y. Huang, C. Ken Shih, Kang L. Wang, and Jane P. Chang
Luminescence of Nanocrystalline Erbium-Doped Ytria
Advanced Functional Materials 19, 748-754 (2009)

2008

- 118 J.Y. Huang, F. Ding, and B.I. Yakobson
Dislocation dynamics in multiwalled carbon nanotubes at high temperatures
Phys. Rev. Lett. 100, 035503 (2008)
- 117 Huisheng Peng, Daoyong Chen, Jian Yu Huang, S. B. Chikkannanavar, J. Hanisch, Menka Jain, D. E. Peterson, S. K Doorn, Yunfeng Lu, Y. T. Zhu, and Q. X. Jia
Strong and ductile colossal carbon tubes with walls of rectangular macropores
Phys. Rev. Lett. 101, 145501 (2008) (Highlighted in **Nature News, MRS eNews, Sandia Lab. News**)
- 116 J.Y. Huang, F. Ding, B. I. Yakobson

- Vacancy-hole and vacancy-tube migration in multiwall carbon nanotubes*
Phys. Rev. B 78, 155436 (2008)
- 115 Huisheng Peng, Menka Jain, Satishkumar B. Chikkannanavar, Jianyu Huang, Filip Ronning, Qingwen Li, Lianxi Zheng, Lei Fu, Dean E. Peterson, Quanxi Jia, Yuntian Zhu
Carbon Nanotube Arrays for Fiber Spinning under Prolonged Growth Time
(submitted)
- 114 C. N. Chinnasamy, J.Y. Huang, L. H. Lewis, and V. G. Harris
Direct chemical synthesis of high coercivity air-stable SmCo nanoblades
Appl. Phys. Lett. 93, 032505 (2008) (Highlighted in [Northeastern University press release](#), [nanotechweb](#), [azonano](#), [nanotech-now...](#))
- 113 Chee Huei Lee, Jiesheng Wang, Vijaya K. Kayastha, Jian Y. Huang, Yoke Khin Yap
High Yield Synthesis of Boron Nitride Nanotubes by Thermal Chemical Vapor Deposition
Nanotechnology 19, 455605 (2008)
- 112 Yuanbin Mao, Jian Y. Huang, Roman Ostroumov, Kang L. Wang, and Jane P. Chang
Synthesis and luminescence properties of erbium-doped Y₂O₃ nanotubes
J. Phys. Chem. C 112, 2278-2285 (2008).
- 111 M. Liu, O. Obi, J. Lou, S. Stoute, J. Y. Huang, Z. Cai, K. S. Ziemer, and N. X. Sun
Spin-spray deposited multiferroic composite Ni_{0.23}Fe_{2.77}O₄/Pb(Zr,Ti)O₃ with strong interface adhesion
Appl. Phys. Lett. 92, 152504 (2008)
- 110 Leon L. Shaw, Juan Villegas, Jianyu Huang, Shuo Chen
Strengthening via deformation twinning in a nickel alloy
Mater. Sci. Eng. A 480, 75-83 (2008)

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- 109 J.Y. Huang, F. Ding, J. Kun, B.I. Yakobson
Real time microscopy, kinetics, and mechanism of giant fullerene evaporation
Phys. Rev. Lett. 99,175503 (2007). (Highlighted in [Nature Nanotechnology](#), [New Scientist](#), [Science News](#), [EETimes](#), [Nanotechweb](#), [Sciencedaily...](#))
- 108 J.Y. Huang, S. Chen, Z.F. Ren, Z. Wang, K. Kempa, M.J. Naughton, G. Chen, and M. S. Dresselhaus
Enhanced ductile behavior of tensile-elongated individual double- and triple-walled carbon nanotubes at high temperatures
Phys. Rev. Lett. 98, 185501 (2007)
- 107 J.Y. Huang
In Situ Observation of Quasimelting of Diamond and Reversible Graphite-Diamond Phase Transformations
Nano Lett. 7, 2335-2340 (2007) (Highlighted in [Nature](#) 448, 396-397 (2007), [Sandia Lab. News](#)).
- 106 J.Y. Huang, F. Ding, K. Jiao, and B.I. Yakobson
Self-templated growth of carbon nanotube walls
Small 3, 1735-1739 (2007)
- 105 C. Dames, S. Chen, C.T. Harris, J.Y. Huang, Z.F. Ren, M.S. Dresselhaus, G. Chen
A hot wire probe for thermal measurements of nanowires and nanotubes inside a transmission electron microscope
Review of Scientific Instruments 78, 104903 (2007)
- 104 X.F. Zhang, Q.W. Li, T.G. Holesinger, P.N. Arendt, J.Y. Huang, P.D. Kirven, T.G. Clapp, R.F. DePaula, X.Z. Liao, Y.H. Zhao, L.X. Zheng, D.E. Peterson, and Y.T. Zhu
Ultra strong, stiff and lightweight carbon nanotube fiber
Advanced Materials 19, 4198-4201 (2007)
- 103 T.D. Shen, R.B. Schwarz, S. Feng, J.G. Swadener, J.Y. Huang, M. Tang, Jianzhong Zhang, S.C. Vogel, Yusheng Zhao
Effect of solute segregation on the strength of nanocrystalline alloys: Inverse Hall–Petch relation
Acta Mater. 55, 5007-5013 (2007).
- 102 M. Liu, X. Li, H. Imrane, Y. Chen, T. Goodrich, K.S. Ziemer, J.Y. Huang, and N.X. Sun
Synthesis of Ordered Arrays of Multiferroic NiFe₂O₄-Pb(Zr_{0.52}Ti_{0.48})O₃ Core-Shell Nanowires
Appl. Phys. Lett. 90, 1152501 (2007)
- 101 Y. M. Wang, J.Y. Huang, T. Jiao, Y.T. Zhu, and A.V. Hamza
Abnormal strain hardening in nanostructured titanium at high strain rates and large strains
J. Mater. Sci. 42, 1751-1756 (2007).

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- 100 J.Y. Huang, S. Chen, Z.Wang, K.Kempa, Y.M.Wang, S.H.Jo, G.Chen, M.S. Dresselhaus, and Z.F. Ren
Superplastic carbon nanotubes
Nature 439, 281-281 (2006) (Highlighted in **New Scientist**, **MRS-enews**, **Nanotechweb**, **Chemical Engineering News...**)
- 99 J.Y. Huang, S. Chen, Z.F. Ren, Z.Q. Wang, D.Z. Wang, M. Vaziri, Suo, Z., G. Chen, and M.S. Dresselhaus
Kink formation and motion in carbon nanotubes
Phys. Rev. Lett. 97, 075501 (2006) (Highlighted in **Nature Nanotechnology**, **Materials Today**)
- 98 J.Y. Huang, S.Chen, Z.F. Ren, G. Chen, and M.S. Dresselhaus
Real time observation of tubule formation from amorphous carbon nanowires under high-bias joule heating
Nano. Lett. 7, 1699 (2006)
- 97 W.Z Wang, B.Q. Zeng, J. Yang, B. Poudel, J.Y. Huang, M. J. Naughton, and Z.F. Ren
Aligned Ultralong ZnO Nanobelts and Their Enhanced Field Emission
Adv. Mater. 18, 3275-3278 (2006)
- 96 B.Q. Han, J.Y. Huang, Y.T. Zhu, and E.J. Lavernia
Negative Strain-rate Sensitivity in a Nanostructured Aluminum Alloy
Adv. Eng. Mater. 8, 945-947 (2006)
- 95 B.Q. Han, J.Y. Huang, Y.T. Zhu, E.J. Lavernia
Strain rate dependence of properties of cryomilled bimodal 5083 Al alloys
Acta Materialia 54, 3015-3024 (2006)
- 94 B.Q. Han, J.Y. Huang, Y.T. Zhu, and E.J. Lavernia
Effect of strain rate on the ductility of a nanostructured aluminum alloy
Scripta Materialia 54, 1175-1180 (2006)
- 93 B. Poudel, W.Z. Wang, D.Z. Wang, J.Y. Huang, Z.F. Ren
Shape evolution of lead telluride and selenide nanostructures under different hydrothermal synthesis conditions
Journal of Nanoscience and Nanotechnology 6, 1050-1053 (2006)

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- 92 J.Y. Huang, S. Chen, S.H. Jo, Z. Wang, D.X. Han, G. Chen, M.S. Dresselhaus, and Z. F. Ren
Atomic scale imaging of wall-by-wall breakdown and concurrent transport measurements in multiwall carbon nanotubes
Phys. Rev. Lett. 94, 236802-1-4 (2005)
- 91 J.Y. Huang, K. Kempa, S. H. Jo, S. Chen and Z. F. Ren
Giant field enhancement at carbon nanotube tips induced by multistage effect
Appl. Phys. Lett. 87, 053110-1-3 (2005)
- 90 J.Y. Huang, L.C. Zhang, S. Chen, D.Z. Wang, S.H. Jo, W.Z. Li, and Z.F. Ren
Interface reactions in chromium buffer layer deposited between stainless steel and silicon substrate
Philo. Mag. 85, 1459-1471 (2005)
- 89 S. Chen, J.Y. Huang, Z. Wang, K. Kempa, G. Chen, and Z. F. Ren
High-bias-induced structure and the corresponding electronic property changes in carbon nanotubes
Appl. Phys. Lett. 87, 263107 (2005)
- 88 S. H. Jo, J. Y. Huang, S. Chen, G. Y. Xiong, D. Z. Wang, and Z. F. Ren
Field emission of carbon nanotubes grown on carbon cloth
J. Vac. Sci. Technol. B 23,,2363-2368 (2005)
- 87 D.Cai, J.M.Mataraza, Z.H.Qin, Z.P.Huang, J.Y. Huang, T.C. Chiles, D. Carnahan, K. Kempa, Z.F. Ren
Highly efficient molecular delivery into mammalian cells using carbon nanotube spearing
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- 86 W.Z. Wang, B. Poudel, J.Y. Huang, D.Z. Wang, S. Kunwar, Z.F. Ren
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Langmuir 21, 1126-1129 (2005)
- 85 W.Z. Wang, J.Y. Huang, Z.F. Ren
Synthesis of germanium nanocubes by a low-temperature inverse micelle solvothermal technique
Nanotechnology 16, 1935-1940 (2005)

- 84 W.Z. Wang, J.Y. Huang, D.Z. Wang, Z.F. Ren
Low-temperature hydrothermal synthesis of multiwall carbon nanotubes
Carbon 43, 1328-1331 (2005)
- 83 G.Y. Xiong, Y. Suda, D.Z. Wang, J.Y. Huang, Z.F. Ren
Effect of temperature, pressure, and gas ratio of methane to hydrogen on the synthesis of double-walled carbon nanotubes by chemical vapor deposition
Nanotechnology 16, 532-535 (2005)
- 82 W.Z. Wang, S. Kunwar, J.Y. Huang, D.Z. Wang, Z.F. Ren
Low temperature solvothermal synthesis of multiwall carbon nanotubes
Nanotechnology 16, 21-23 (2005)
- 81 D. Banerjee, J. Rybczynski, J.Y. Huang, D.Z. Wang, K. Kempa, Z.F. Ren
Large hexagonal arrays of aligned ZnO nanorods
Applied Physics A 80, 749-752 (2005)
- 80 C. Dames, B. Poudel, W. Z. Wang, J. Y. Huang, Z. F. Ren, Y. Sun, J. I. Oh, C. Opeil, M. J. Naughton, and G. Chen
Low-dimensional phonon specific heat of titanium dioxide nanotubes
Appl. Phys. Lett. 87, 031901 (2005)
- 79 B.Poudel, W.Z.Wang, C.Dames, J.Y.Huang, S.Kunwar, D.Z.Wang, D.Banerjee, G.Chen, and Z. F. Ren
Formation of crystallized titania nanotubes and their transformation into nanowires
Nanotechnology 16, 1935-1940 (2005)

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- 78 Jianyu Huang, Yuntian T.Zhu, David J.Alexander, Xiaozhou Liao, Terry C. Lowe, and Robert J. Asaro
Development of repetitive corrugation and straightening
Mater. Sci. Eng. A371, 35-39 (2004)
- 77 J.Y. Huang, Y.T. Zhu, X. Z. Liao, and R. Z. Valiev
Amorphization of TiNi induced by high-pressure torsion
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- 76 J.Y. Lao, J.Y. Huang, D.Z. Wang, and Z.F. Ren
Hierarchical oxide nanostructures
Journal of Materials Chemistry 14 (4): 770-773 (2004)
- 75 J.Y. Lao, J.Y. Huang, D.Z. Wang, Z.F. Ren, D. Steeves, B. Kimball, and W. Porter
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Self-assembled In₂O₃ nanocrystal chain and nanowire networks
Advanced Materials 16, 65-69 (2004)
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Graphitization of diamond powders of different sizes at high pressure-high temperature
Carbon 42, 2691-2697 (2004)
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Synthesis and characterization of boron carbide nanoparticles
Appl. Phys. A 79, 1757-1759 (2004)
- 71 S. H. Jo, D. Z. Wang, J. Y. Huang, W. Z. Li, K. Kempa, and Z. F. Ren
Field emission of carbon nanotubes grown on carbon cloth
Appl. Phys. Lett. 85, 810-812 (2004)
- 70 S.H. Jo, Y. Tu, Z.P. Huang, D.L. Carnahan, J.Y. Huang, D.Z. Wang, and Z.F. Ren
Correlation of field emission and surface microstructure of vertically aligned carbon nanotubes
Appl. Phys. Lett. 84, 413-415 (2004)