

**HOT PAPERS IN MATERIALS SCIENCE**  
**2005-2007**  
**BASED ON DATA IN THOMSON SCIENTIFIC'S**  
**ESSENTIAL SCIENCE INDICATORS**

**1 Citations: 87**

**Title:** THE RISE OF GRAPHENE

**Authors:** GEIM AK; NOVOSELOV KS

**Source:** [NAT MATER](#) 6 (3): 183-191 MAR 2007

**Addresses:** [Univ Manchester](#), Manchester Ctr Mesosci & Nanotechnol, Oxford Rd, Manchester M13 9PL, Lancs, [England](#).  
[Univ Manchester](#), Manchester Ctr Mesosci & Nanotechnol, Manchester M13 9PL, Lancs, [England](#).

**2 Citations: 78**

**Title:** MECHANICAL PROPERTIES OF NANOCRYSTALLINE MATERIALS

**Authors:** [MEYERS MA](#); [MISHRA A](#); BENSON DJ

**Source:** [PROG MATER SCI](#) 51 (4): 427-556 MAY 2006

**Addresses:** [Univ Calif San Diego](#), Dept Mech & Aerosp Engn, Mat Sci & Engn Program, Mail Code 0411, La Jolla, CA 92093 USA.  
[Univ Calif San Diego](#), Dept Mech & Aerosp Engn, Mat Sci & Engn Program, La Jolla, CA 92093 USA.

**3 Citations: 77**

**Title:** A STRONG REGIOREGULARITY EFFECT IN SELF-ORGANIZING CONJUGATED POLYMER FILMS AND HIGH-EFFICIENCY POLYTHIOPHENE: FULLERENE SOLAR CELLS

**Authors:** [KIM Y](#); [COOK S](#); TULADHAR SM; CHOULIS SA; [NELSON J](#); [DURRANT JR](#); [BRADLEY DDC](#); GILES M; MCCULLOCH I; [HA CS](#); [REE M](#)

**Source:** [NAT MATER](#) 5 (3): 197-203 MAR 2006

**Addresses:** [Univ London Imperial Coll Sci Technol & Med](#), Blackett Lab, Dept Phys, London SW7 2BW, [England](#).  
[Univ London Imperial Coll Sci Technol & Med](#), Dept Chem, London SW7 2AZ, [England](#).  
Merck Chem, Southampton SO16 7QD, Hants, [England](#).  
[Pusan Natl Univ](#), Dept Polymer Sci & Engn, Pusan 609735, [South Korea](#).  
[Pohang Univ Sci & Technol](#), Dept Chem, Pohang 790784, [South Korea](#).  
[Pohang Univ Sci & Technol](#), Pohang Accelerator Lab, Pohang 790784, [South Korea](#).

4 **Citations:** 70

**Title:** LIQUID-CRYSTALLINE SEMICONDUCTING POLYMERS WITH HIGH CHARGE-CARRIER MOBILITY

**Authors:** MCCULLOCH I; HEENEY M; BAILEY C; GENEVICIUS K; MACDONALD I; SHKUNOV M; SPARROWE D; TIERNEY S; [WAGNER R](#); [ZHANG WM](#); CHABINYC ML; KLINE RJ; [MCGEHEE MD](#); TONEY MF

**Source:** [NAT MATER](#) 5 (4): 328-333 APR 2006

**Addresses:** Merck Chem, Chilworth Sci Pk, Southampton SO16 7QD, Hants, [England](#).  
Merck Chem, Southampton SO16 7QD, Hants, [England](#).  
Palo Alto Res Ctr, Palo Alto, CA 94304 USA.  
[Stanford Univ](#), Dept Mat Sci & Engn, Stanford, CA 94305 USA.  
[Stanford Synchrotron Radiat Lab](#), Menlo Pk, CA 94025 USA.

5 **Citations:** 62

**Title:** METAL-ORGANIC FRAMEWORKS - PROSPECTIVE INDUSTRIAL APPLICATIONS

**Authors:** MUELLER U; [SCHUBERT M](#); TEICH F; PUETTER H; SCHIERLE-ARNDT K; PASTRE J

**Source:** [J MATER CHEM](#) 16 (7): 626-636 FEB 21 2006

**Addresses:** [BASF AG](#), D-67056 Ludwigshafen, [Germany](#).

6 Citations: 62

**Title:** MECHANICAL REINFORCEMENT OF POLYMERS USING CARBON NANOTUBES

**Authors:** [COLEMAN JN](#); KHAN U; GUN'KO YK

**Source:** [ADVAN MATER](#) 18 (6): 689-706 MAR 17 2006

**Addresses:** [Univ Dublin Trinity Coll](#), Sch Phys, Dublin 2, [Ireland](#).  
[Univ Dublin Trinity Coll](#), Sch Chem, Dublin 2, [Ireland](#).

7 Citations: 55

**Title:** NEW ARCHITECTURE FOR HIGH-EFFICIENCY POLYMER PHOTOVOLTAIC CELLS USING SOLUTION-BASED TITANIUM OXIDE AS AN OPTICAL SPACER

**Authors:** [KIM JY](#); [KIM SH](#); [LEE HH](#); [LEE K](#); [MA WL](#); [GONG X](#); [HEEGER AJ](#)

**Source:** [ADVAN MATER](#) 18 (5): 572-+ MAR 3 2006

**Addresses:** [Pusan Natl Univ](#), Dept Phys, Pusan 609735, [South Korea](#).  
[Univ Calif Santa Barbara](#), Ctr Polymers & Organ Solids, Santa Barbara, CA 93106 USA.

8 Citations: 53

**Title:** A FAST AND ROBUST ALGORITHM FOR BADER DECOMPOSITION OF CHARGE DENSITY

**Authors:** [HENKELMAN G](#); ARNALDSSON A; [JONSSON H](#)

**Source:** [COMPUT MATER SCI](#) 36 (3): 354-360 JUN 2006

**Addresses:** [Univ Texas](#), Dept Chem & Biochem, Austin, TX 78712 USA.  
[Univ Washington](#), Dept Chem 351700, Seattle, WA 98195 USA.  
[Univ Iceland](#), Fac Sci, IS-107 Reykjavik, [Iceland](#).

9 Citations: 52

**Title:** HOW USEFUL IS SBF IN PREDICTING IN VIVO BONE BIOACTIVITY?

**Authors:** [KOKUBO T](#); TAKADAMA H

<b>Source:</b>	<a href="#">BIOMATERIALS</a> 27 (15): 2907-2915 MAY 2006
<b>Addresses:</b>	Chubu Univ, Coll Life & Hlth Sci, Dept Biomed Sci, 1200 Matsumoto, Kasugai, Aichi 4878501, <a href="#">Japan</a> . Chubu Univ, Coll Life & Hlth Sci, Dept Biomed Sci, Kasugai, Aichi 4878501, <a href="#">Japan</a> .
<b>10 Citations: 51</b>	
<b>Title:</b>	PRINCIPLES OF EQUAL-CHANNEL ANGULAR PRESSING AS A PROCESSING TOOL FOR GRAIN REFINEMENT
<b>Authors:</b>	<a href="#">VALIEV RZ</a> ; <a href="#">LANGDON TG</a>
<b>Source:</b>	<a href="#">PROG MATER SCI</a> 51 (7): 881-981 SEP 2006
<b>Addresses:</b>	<a href="#">Univ So Calif</a> , Dept Aerosp & Mech Engn, Los Angeles, CA 90089 USA. <a href="#">Univ So Calif</a> , Dept Mat Sci, Los Angeles, CA 90089 USA. <a href="#">Ufa State Aviat Tech Univ</a> , Inst Phys Adv Mat, Ufa 450000, <a href="#">Russia</a> . <a href="#">Univ Southampton</a> , Sch Engn Sci, Mat Res Grp, Southampton SO17 1BJ, Hants, <a href="#">England</a> .

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