

REPRESENTATIVE PUBLICATIONS BY LOS ALAMOS STAFF ON OFFICE OF SCIENCE PROGRAMS IN 2006

BASICS ENERGY SCIENCES

- 4f-5f heterotrimetallic complexes exhibiting electrochemical and magnetic communication**
Schelter, EJ; Veauthier, JM; Thompson, JD; Scott, BL; John, KD; Morris, DE; Kiplinger, JL
Source: JOURNAL OF THE AMERICAN CHEMICAL SOCIETY; FEB 22 2006; v.128, no.7, p.2198-2199
- Absorption cross sections and Auger recombination lifetimes in inverted core-shell nanocrystals: Implications for lasing performance**
Nanda, J.; Ivanov, SA; Htoon, H.; Bezel, I.; Piryatinski, A.; Tretiak, S.; Klimov, VI
Source: Journal of Applied Physics; Feb 1 2006; v.99, no.3
- Actinide-mediated cyclization of 1,2,4,5-tetracyanobenzene: Synthesis and characterization of self-assembled trinuclear thorium and uranium macrocycles**
Kiplinger, JL; Pool, JA; Schelter, EJ; Thompson, JD; Scott, BL; Morris, DE
Source: ANGEWANDTE CHEMIE-INTERNATIONAL EDITION; 2006; v.45, no.13, p.2036-2041
- Amplified spontaneous emission in semiconductor-nanocrystal/ synthetic-opal composites: Optical-gain enhancement via a photonic crystal pseudogap**
Maskaly, GR; Petruska, MA; Nanda, J; Bezel, IV; Schaller, RD; Htoon, H; Pietryga, JM; Klimov, VI
Source: Advanced Materials; Feb 3 2006; v.18, no.3, p.343-34
- Angle-resolved photoemission study of dispersive and narrow-band 5f states in UAsSe**
Guziewicz, E; Durakiewicz, T; Oppeneer, PM; Joyce, JJ; Thompson, JD; Olson, CG; Butterfield, MT; Wojakowski, A; Moore, DP; Arko, AJ
Source: PHYSICAL REVIEW B; APR 2006; v.73, no.15, p.155119
- Antiferromagnetic quantum critical point in CeRhIn_xSn_x**
Bauer, ED; Mixson, D.; Ronning, F.; Hur, N.; Movshovich, R.; Thompson, JD; Sarrao, JL; Hundley, MF; Tobash, PH; Bobev, S.
Source: Physica B: Condensed Matter; May 1 2006; v.378-380, no.SPEC. ISS., p.142-143
- Application of high energy ion beam for the control of boron diffusion.**
Lin Shao; Nastasi, M.; Thompson, PE; Chen, QY; Jiarui Liu; Wei-Kan Chu
Source: Nuclear Instruments & Methods in Physics Research, Section B (Beam Interactions with Materials and Atoms); Jan. 2006; vol.242, no.1-2, p.670-2
- Chemical bonding investigation of amorphous hydrogenated Si-N alloys deposited by plasma immersion ion processing**
Jacobsohn, LG; Schulze, RK; Daemen, LL; Afanasyev-Charkin, IV; Nastasi, M
Source: Thin Solid Films; 3 Jan. 2006; vol.494, no.1-2, p.219-22
- Chemical short-range order in ion-beam-induced amorphous SiC: Irradiation temperature dependence**
Ishimaru, M; Bae, IT; Hirata, A; Hirotsu, Y; Valdez, JA; Sickafus, KE
Source: Nuclear Instruments & Methods in Physics Research, Section B (Beam Interactions with Materials and Atoms); Jan. 2006; vol.242, no.1-2, p.473-5
- Chemical speciation of heterogeneously reduced Pu in synthetic brines**
Ding, M; Conca, JL; den Auwer, C; Gabitov, RI; Hess, NJ; Paviet-Hartmann, P; Palmer, PD; LoPresti, V; Conradson, SD
Source: RADIOCHIMICA ACTA; 2006; v.94, no.5, p.249-259
- Comparison of hybrid density functional theory with photoemission of surface oxides of delta-plutonium**
Butterfield, MT; Durakiewicz, T; Prodan, ID; Scuseria, GE; Guziewicz, E; Sordo, JA; Kudin, KN; Martin, RL; Joyce, JJ; Arko, AJ; et. al.
Source: SURFACE SCIENCE; APR 15 2006; v.600, no.8, p.1637-1640
- Compressive deformation of in situ formed bulk metallic glass composites**
Clausen, B; Lee, SY; Ustundag, E; Kim, CP; Brown, DW; Bourke, MAM
Source: Scripta Materialia; February 2006; v.54, no.3, p.343-347

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13. **Copper deficiency in UCu_{5-x}Sn [x=0.37 (1)]**
Bobev, S; Bauer, ED; Sarrao, JL
Source: ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE; APR 2006; v.62, pt.4, p.I106-I108
14. **Dearomatization and functionalization of terpyridine by lutetium(III) alkyl complexes**
Jantunen, KC; Scott, BL; Hay, PJ; Gordon, JC; Kiplinger, JL
Source: JOURNAL OF THE AMERICAN CHEMICAL SOCIETY; MAY 17 2006; v.128, no.19, p.6322-6323
15. **Dynamical electric and magnetic metamaterial response at terahertz frequencies.**
Padilla, WJ; Taylor, AJ; Highstrete, C; Lee, M; Averitt, RD
Source: Physical Review Letters; 17 March 2006; vol.96, no.10, p.107401/1-4
16. **Dynamics of photoexcited quasiparticles in heavy electron compounds**
Demsar, J; Sarrao, JL; Taylor, AJ
Source: Journal of Physics: Condensed Matter; 26 April 2006; vol.18, no.16, p.R281-314
17. **Effects of thermal quenching on ion-beam-induced phase transformation detection by ion-beam-induced luminescence.**
Sickafus, KE; Gosnell, GE; Wetteland, CJ; Tesmer, JR; Hollander, MG; Cooke, DW; Afanasyev, IV
Source: Nuclear Instruments & Methods in Physics Research, Section B (Beam Interactions with Materials and Atoms); Dec. 2005; vol.241, no.1-4, p.563-7
18. **Electronic structure calculations of electronic and structural properties of plutonium 115 compounds**
Wills, JM; Lizarraga, R.; Joyce, JJ; Durakiewicz, T.; Sarrao, JL; Morales, L.; Eriksson, O.
Source: Materials Research Society Symposium Proceedings; 2006; v.893, p.117-124
19. **Electronic structure and magnetism in actinide compounds**
Durakiewicz, T.; Joyce, JJ; Lander, GH; Olson, CG; Butterfield, MT; Guziewicz, E.; Batista, CD; Arko, AJ; Morales, L.; Mattenberger, K.; et. al.
Source: Physica B: Condensed Matter; May 1 2006; v.378-380, no.SPEC. ISS., p.1033-1034
20. **Electronic structure of layered uranium compounds from photoemission spectroscopy**
Guziewicz, E; Durakiewicz, T; Olson, CG; Joyce, JJ; Butterfield, MT; Arko, AJ; Sarrao, JL; Wojakowski, A
Source: SURFACE SCIENCE; APR 15 2006; v.600, no.8, p.1632-1636
21. **Electronic structure of PuCoGa₅ and UCoGa₅**
Bauer, ED; Durakiewicz, T.; Butterfield, MT; Guziewicz, E.; Joyce, JJ; Olson, CG; Morales, LA; Sarrao, JL; Thompson, JD
Source: Materials Research Society Symposium Proceedings; 2006; v.893, p.125-131
22. **Energy dependence of excessive vacancies created by high energy Si⁺ ion implantation in Si.**
Lin Shao; Nastasi, M.; Thompson, PE; Rusakova, I.; Chen, QY; Jiarui Liu; Wei-Kan Chu
Source: Nuclear Instruments & Methods in Physics Research, Section B (Beam Interactions with Materials and Atoms); Jan. 2006; vol.242, no.1-2, p.506-8
23. **Enhancing photocatalytic activity by using TiO₂-MgO core-shell-structured nanoparticles.**
Hyun Suk Jung; Jung-Kun Lee; Nastasi, M.; Jeong-Ryeol Kim; Sang-Wook Lee; Jin Young Kim; Jong-Sung Park; Kug Sun Hong; Hyunho Shin
Source: Applied Physics Letters; 2 Jan. 2006; vol.88, no.1, p.13107-1-3
24. **Evolution of the heavy fermion state in Ce₂IrIn₈**
Heffner, RH; Morris, GD; Bauer, ED; Sarrao, JL; Thompson, JD; MacLaughlin, DE; Shu, L
Source: Physica B: Condensed Matter; Mar 31 2006; v.374-375, p.184-187
25. **Existence and stability of lanthanide-main group element multiple bonds. New paradigms in the bonding of the 4f elements. A DFT study of Cp₂CeZ (Z = F⁺, O, NH, CH⁻, CH₂) and the ligand adduct Cp₂Ce(CH₂)(NH₃)**
Clark, DL; Gordon, JC; Hay, PJ; Poli, R
Source: Organometallics; Nov 7 2005; v.24, no.23, p.5747-5758

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26. **Fabrication of silicon-on-SiO₂/diamondlike-carbon dual insulator using ion cutting and mitigation of self-heating effects**
Di, ZF; Chu, PK; Zhu, M; Fu, RKY; Luo, SH; Shao, L; Nastasi, M; Chen, P; Alford, TL; Mayer, JW; et. al.
Source: APPLIED PHYSICS LETTERS; APR 3 2006; v.88, no.14, p.142108
27. **Formation of a new dynamical mode in alpha -uranium observed by inelastic X-ray and neutron scattering.**
Manley, ME; Yethiraj, M; Sinn, H; Volz, HM; Alatas, A; Lashley, JC; Hults, WL; Lander, GH; Smith, JL
Source: Physical Review Letters; 31 March 2006; vol.96, no.12, p.125501/1-4
28. **Formation of hydrogen complexes in proton implanted silicon and their influence on the crystal damage**
Hochbauer, T; Misra, A; Nastasi, M; Mayer, JW; Ensinger, W
Source: Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms; January 2006; v.242, no.1-2, p.623-626
29. **Formation of nanoporous noble metal thin films by electrochemical dealloying of Pt_xSi_{1-x}**
Thorp, JC; Sieradzki, K; Tang, L; Crozier, PA; Misra, A; Nastasi, M; Mitlin, D; Picraux, ST
Source: APPLIED PHYSICS LETTERS; JAN 16 2006; v.88, no.3, p.033110
30. **Generating hydrogen-rich fuel-cell feeds from dimethyl ether (DME) using physical mixtures of a commercial Cu/Zn/Al₂O₃ catalyst and several solid-acid catalysts**
Semelsberger, Troy A.; Ott, Kevin C.; Borup, Rodney L.; Greene, Howard L.
Source: Applied Catalysis B: Environmental; Jun 6 2006; v.65, no.3-4, p.291-300
31. **Heavy ion irradiation-induced phase transformation in polycrystalline Dy₂O₃**
Tang, M; Lu, P; Valdez, JA; Sickafus, KE
Source: Philosophical Magazine; Apr 11 2006; v.86, no.11, p.1597-1613
32. **Hidden magnetism and quantum criticality in the heavy fermion superconductor CeRhIn₅**
Park, T; Ronning, F; Yuan, HQ; Salamon, MB; Movshovich, R; Sarrao, JL; Thompson, JD
Source: Nature; 2 March 2006; vol.440, no.7080, p.65-8
33. **High-pressure microscopy**
Wang, ZW; Zhao, YS
Source: SCIENCE; MAY 26 2006; v.312, no.5777, p.1149-1150
34. **High-strength sputter-deposited Cu foils with preferred orientation of nanoscale growth twins**
Zhang, X; Wang, H; Chen, XH; Lu, L; Lu, K; Hoagland, RG; Misra, A
Source: APPLIED PHYSICS LETTERS; APR 24 2006; v.88, no.17, p.173116
35. **H-induced platelet and crack formation in hydrogenated epitaxial Si/Si_{0.98}B_{0.02}/Si structures.**
Lin Shao; Yuan Lin; Swadener, JG; Lee, JK; Jia, QX; Wang, YQ; Nastasi, M.; Thompson, PE; Theodore, ND; Alford, TL; et. al.
Source: Applied Physics Letters; 9 Jan. 2006; vol.88, no.2, p.21901-1-3
36. **Imaging nonlinear scatterers applying the time reversal mirror**
Ulrich, TJ; Johnson, PA; Sutin, A
Source: Journal of the Acoustical Society of America; March 2006; vol.119, no.3, p.1514-18
37. **In situ loading response of WC-Ni: Origins of toughness**
Paggett, JW; Krawitz, AD; Drake, EF; Bourke, MAM; Livescu, V; Claussen, B; Brown, DW
Source: International Journal of Refractory Metals & Hard Materials; Jan. 2006; vol.24, no.1-2, p.122-8
38. **Interplay of magnetism, structure and superconductivity in heavy-fermion systems CeMIn₅ and PuMGa₅**
Thompson, JD; Nicklas, M; Sidorov, VA; Bauer, ED; Movshovich, R; Curro, NJ; Sarrao, JL
Source: Journal of Alloys and Compounds; Feb 9 2006; v.408-412, p.16-20
39. **Invar model for delta-phase Pu: thermal expansion, elastic and magnetic properties**
Lawson, AC; Roberts, JA; Martinez, B; Ramos, M; Kotliar, G; Trouw, FW; Fitzsimmons, MR; Hehlen, MP; Lashley, JC; Ledbetter, H; et. al.
Source: PHILOSOPHICAL MAGAZINE; JUN 11 2006; v.86, no.17-18, p.2713-2733

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40. **Investigation of the magnetic susceptibility of nanocomposites obtained in zero-field-cooled conditions**
Jacobsohn, LG; Hundley, MF; Thompson, JD; Dickerson, RM; Nastasi, M
Source: Journal of Vacuum Science & Technology B (Microelectronics and Nanometer Structures); Jan. 2006; vol.24, no.1, p.321-5
41. **Ion irradiation of porous silicon: The role of surface states**
Jacobsohn, LG; Bennett, BL; Cooke, DW; Muenchausen, RE; Nastasi, M
Source: Nuclear Instruments & Methods in Physics Research, Section B (Beam Interactions with Materials and Atoms); Jan. 2006; vol.242, no.1-2, p.164-6
42. **Ion-cut of Si facilitated by interfacial defects of Si substrate/epitaxial layer grown by molecular-beam epitaxy.**
Lin Shao; Lee, JK; Hochbauer, T.; Nastasi, M.; Thompson, PE; Rusakova, I.; Seo, HW; Chen, QY; Liu, JR; Wei-Kan Chu
Source: Nuclear Instruments & Methods in Physics Research, Section B (Beam Interactions with Materials and Atoms); Jan. 2006; vol.242, no.1-2, p.509-11
43. **Ion-irradiation-induced phase transformation in rare earth sesquioxides ($Dy_{2}O_{3}$, $Er_{2}O_{3}$, $Lu_{2}O_{3}$).**
Tang, M.; Lu, P.; Valdez, JA; Sickafus, KE
Source: Journal of Applied Physics; 15 March 2006; vol.99, no.6, p.63514-1-7
44. **Iron-rich post-perovskite and the origin of ultralow-velocity zones**
Mao, WL; Mao, HK; Sturhahn, W; Zhao, JY; Prakapenka, VB; Meng, Y; Shu, JF; Fei, YW; Hemley, RJ
Source: SCIENCE; APR 28 2006; v.312, no.5773, p.564-565
45. **Irreversible dynamics of the phase boundary in $U(Ru_{0.96}Rh_{0.04})_{2}Si_{2}$ and implications for ordering**
Silhanek, AV; Jaime, M; Harrison, N; Fanelli, VR; Batista, CD; Amitsuka, H; Nakatsuji, S; Balicas, L; Kim, KH; Fisk, Z; et. al.
Source: PHYSICAL REVIEW LETTERS; APR 7 2006; v.96, no.13, p.136401
46. **Issues in the coarse-graining of dislocation energetics and dynamics**
Rickman, JM; LeSar, R
Source: Scripta Materialia; March 2006; vol.54, no.5, p.735-9
47. **Limits for ordered magnetism in Pu from muon spin rotation spectroscopy**
Heffner, RH; Morris, GD; Fluss, MJ; Chung, B; McCall, S; MacLaughlin, DE; Shu, L; Ohishi, K; Bauer, ED; Sarrao, JL; et. al.
Source: PHYSICAL REVIEW B; MAR 2006; v.73, no.9, p.094453
48. **Load sharing in tungsten fiber reinforced Kanthal composites**
Clausen, B; Bourke, MAM; Brown, DW; Ustundag, E
Source: MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING; APR 15 2006; v.421, no.1-2, SI, p.9-14
49. **Localized and itinerant states in Pu materials**
Joyce, JJ; Wills, JM; Durakiewicz, T.; Butterfield, MT; Guziewicz, E.; Graham, KS; Sarrao, JL; Arko, AJ; Bauer, ED; Moore, DP; et. al.
Source: Materials Research Society Symposium Proceedings; 2006; v.893, p.59-68
50. **Localized excitation in the hybridization gap in $YbAl_{3}$.**
Christianson, AD; Fanelli, VR; Lawrence, JM; Goremychkin, EA; Osborn, R; Bauer, ED; Sarrao, JL; Thompson, JD; Frost, CD; Zarestky, JL
Source: Physical Review Letters; 24 March 2006; vol.96, no.11, p.117206/1-4
51. **Lowering critical cooling rate for forming bulk metallic glass.**
Shen, TD; Schwarz, RB
Source: Applied Physics Letters; 27 Feb. 2006; vol.88, no.9, p.91903-1-3

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52. **Low-temperature growth of crystalline GaN films using energetic neutral atomic-beam lithography/epitaxy.**
Mueller, AH; Akhadov, EA; Hoffbauer, MA
Source: Applied Physics Letters; 23 Jan. 2006; vol.88, no.4, p.41907-1-3
53. **Luminescent properties and reduced dimensional behavior of hydrothermally prepared $Y_{2}SiO_{5}:Ce$ nanophosphors.**
Cooke, DW; Lee, JK; Bennett, BL; Groves, JR; Jacobsohn, LG; McKigney, EA; Muenchausen, RE; Nastasi, M; Sickafus, KE; Tang, M; et. al.
Source: Applied Physics Letters; 6 March 2006; vol.88, no.10, p.103108-1-3
54. **Magnetic properties of self-assembled ferritin-core arrays**
Yuan, Z; Atanassov, P; Alsmadi, AM; Velthuis, SGET; Welp, U; Hammetter, CI; Hjelm, R; Nakotte, H
Source: JOURNAL OF APPLIED PHYSICS; APR 15 2006; v.99, no.8, p.08Q509
55. **Magnetic structures in UCuSn**
El-Khatib, S; Llobet, A; Purwanto, A; Robinson, RA; Lee, SH; Lynn, JW; Chang, S; Nakotte, H
Source: JOURNAL OF APPLIED PHYSICS; APR 15 2006; v.99, no.8, p.08P704
56. **Material dynamics under extreme conditions of pressure and strain rate**
Remington, BA; Allen, P; Bringa, EM; Hawreliak, J; Ho, D; Lorenz, KT; Lorenzana, H; McNaney, JM; Meyers, MA; Pollaine, SW; et. al.
Source: MATERIALS SCIENCE AND TECHNOLOGY; APR 2006; v.22, no.4, p.474-488
57. **Micro-strains in cold rolled Cu-Nb nanolayered composites determined by X-ray line profile analysis**
Nyilas, K; Misra, A; Ungar, T
Source: Acta Materialia; February 2006; v.54, no.3, p.751-755
58. **Model for damage caused by cluster implantation: Non-linear effect due to damage overlap.**
Lin Shao; Nastasi, M.; Xuemei Wang; Jiarui Liu; Wei-Kan Chu
Source: Nuclear Instruments & Methods in Physics Research, Section B (Beam Interactions with Materials and Atoms); Jan. 2006; vol.242, no.1-2, p.503-5
59. **Modeling energetics and noise in dislocation patterning.**
Thomson, R.; Koslowski, M.; LeSar, R.
Source: Physical Review B (Condensed Matter and Materials Physics); 1 Jan. 2006; vol.73, no.2, p.24104-1-7
60. **μ SR studies of the superconducting order parameter in PuCoGa₅**
Morris, GD; Heffner, RH; Bauer, ED; Morales, LA; Sarrao, JL; Fluss, MJ; MacLaughlin, DE; Shu, L; Anderson, JE
Source: PHYSICA B-CONDENSED MATTER; MAR 31 2006; v.374, p.180-183
61. **μ SR study of short-range charge order in YNiO₃ above the monoclinic-orthorhombic transition**
Garcia-Munoz, JL; Mortimer, R; Llobet, A; Alonso, JA; Martinez-Lope, MJ; Cottrell, SP
Source: PHYSICA B-CONDENSED MATTER; MAR 31 2006; v.374, p.87-90
62. **Neutron diffraction investigation of hysteresis reduction and increase in linearity in the stress-strain response of superelastic NiTi**
Rathod, CR; Clausen, B; Bourke, MAM; Vaidyanathan, R
Source: APPLIED PHYSICS LETTERS; MAY 15 2006; v.88, no.20, p.201919
63. **Neutron diffraction study of the deformation mechanisms of the uranium-7 wt.% niobium shape memory alloy**
Brown, DW; Bourke, MAM; Field, RD; Hults, WL; Teter, DF; Thoma, DJ; Vogel, SC
Source: MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING; APR 15 2006; v.421, no.1-2, SI, p.15-21
64. **Non-poissonian exciton populations in semiconductor Nanocrystals via carrier multiplication**
Schaller, Richard D.; Klimov, Victor I.
Source: Physical Review Letters; 2006; v.96, no.9, p.1-4

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65. **On photo-induced phenomena in complex materials: Probing quasiparticle dynamics using infrared and far-infrared pulses**
Hilton, DJ; Prasankumar, RP; Trugman, SA; Taylor, AJ; Averitt, RD
66. **Orientation and lateral mobility of insoluble Tempo amphiphiles at the air/water interface**
Wu, DG; Malec, AD; Majewski, J; Majda, M
Source: Electrochimica Acta; Feb 15 2006; v.51, no.11, p.2237-2246
67. **Pair distribution function and structure factor of spherical particles.**
Howell, RC; Proffen, T.; Conradson, SD
Source: Physical Review B (Condensed Matter and Materials Physics); 1 March 2006; vol.73, no.9, p.94107-1-7
68. **Pair distribution function and structure factor of spherical particles.**
Howell, RC; Proffen, T.; Conradson, SD
Source: Physical Review B (Condensed Matter and Materials Physics); 1 March 2006; vol.73, no.9, p.94107-1-7
69. **Phase-sensitive scattering of a continuous wave on a soliton.**
Efimov, A; Taylor, AJ; Yulin, AV; Skryabin, DV; Knight, JC
Source: Optics Letters; 1 June 2006; vol.31, no.11, p.1624-6
70. **Photoexcited electron dynamics in Kondo insulators and heavy Fermions.**
Demsar, J; Thorsmolle, VK; Sarrao, JL; Taylor, AJ
Source: Physical Review Letters; 27 Jan. 2006; vol.96, no.3, p.037401/1-4
71. **Photoluminescence of He-implanted ZnO**
Hamby, DW; Lucca, DA; Lee, JK; Nastasi, M
Source: Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms; January 2006; v.242, no.1-2, p.663-666
72. **Possible fulde-ferrell-larkin-ovchinnikov inhomogeneous superconducting state in CeCoIn₅**
Movshovich, R; Bianchi, A; Capan, C; Pagliuso, PG; Sarrao, JL
Source: Pramana - Journal of Physics; January 2006; v.66, no.1, p.227-237
73. **Preface to the viewpoint set on: Statistical mechanics and coarse graining of dislocation behavior for continuum plasticity**
Dimiduk, DM; Koslowski, M; LeSar, R
Source: Scripta Materialia; March 2006; vol.54, no.5, p.701-4
74. **Pressure dependence of the Fulde-Ferrell-Larkin-Ovchinnikov state in CeCoIn₅.**
Miclea, CF; Nicklas, M; Parker, D; Maki, K; Sarrao, JL; Thompson, JD; Sparn, G; Steglich, F
Source: Physical Review Letters; 24 March 2006; vol.96, no.11, p.117001/1-4
75. **Pressure study of quantum criticality in CeCoIn₅.**
Ronning, F.; Capan, C.; Bauer, ED; Thompson, JD; Sarrao, JL; Movshovich, R.
Source: Physical Review B (Condensed Matter and Materials Physics); 1 Feb. 2006; vol.73, no.6, p.64519-1-4
76. **Rearrangement of lipid ordered phases upon protein adsorption due to multiple site binding.**
Yim, H; Kent, MS; Sasaki, DY; Polizzotti, BD; Kiick, KL; Majewski, J; Satija, S
Source: Physical Review Letters; 19 May 2006; vol.96, no.19, p.198101/1-4
77. **Scale-free intermittent flow in crystal plasticity**
Dimiduk, DM; Woodward, C; LeSar, R; Uchic, MD
Source: SCIENCE; MAY 26 2006; v.312, no.5777, p.1188-1190
78. **Seven excitons at a cost of one: Redefining the limits for conversion efficiency of photons into charge carriers**
Schaller, RD; Sykora, M; Pietryga, JM; Klimov, VI
Source: Nano Letters; March 2006; v.6, no.3, p.424-429

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79. **Similarities in the C_p/T³ peaks in amorphous and crystalline metals.**
Safarik, DJ; Schwarz, RB; Hundley, MF
Source: Physical Review Letters; 19 May 2006; vol.96, no.19, p.195902/1-4
80. **Single-shot, interferometric, high-resolution, terahertz field diagnostic.**
Kim, KY; Yellampalle, B.; Rodriguez, G.; Averitt, RD; Taylor, AJ; Glowina, JH
Source: Applied Physics Letters; 23 Jan. 2006; vol.88, no.4, p.41123-1-3
81. **Spin dynamics and magnon-phonon interactions in Nd_{0.6}Sr_{0.4}MnO₃**
Kirby, BJ; Rhyne, JJ; Kaiser, H; Kuwahara, H; Tokura, Y
Source: JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS; JUL 2006; v.302, no.1, p.237-243
82. **Structural and optical characterization of fluorinated hydrogenated silicon carbide films deposited by pulsed glow discharge**
Jacobsohn, LG; Franceschini, DF; Afanasyev-Charkin, IV; Cooke, DW; Daemen, LL; Averitt, RD; Nastasi, M.
Source: Surface and Coatings Technology; May 22 2006; v.200, no.20-21, p.6079-6082
83. **Superconductivity: PuCoGa₅ to diamond**
Thompson, JD; Ekimov, EA; Sidorov, VA; Bauer, ED; Morales, LA; Wastin, F; Sarrao, JL
Source: Journal of Physics and Chemistry of Solids; January/March 2006; v.67, no.1-3, p.557-561
84. **Synthesis and characterization of monolayers and Langmuir-Blodgett films of an amphiphilic oligo(ethyleneglycol)-C-60-hexadecaniline conjugate**
Tang, ZX; Padmawar, PA; Canteenwala, T; Gao, Y; Watkins, E; Majewski, J; Chiang, LY; Wang, HL
Source: LANGMUIR; JUN 6 2006; v.22, no.12, p.5366-5373
85. **Temperatures near the interface between an ideal heat exchanger and a thermal buffer tube or pulse tube.**
Swift, GW; Matveev, KI; Backhaus, S.
Source: International Journal of Heat and Mass Transfer; March 2006; vol.49, no.5-6, p.868-78
86. **Texture variation and its influence on the tensile behavior of a friction-stir processed magnesium alloy**
Woo, W; Choo, H; Brown, DW; Liaw, PK; Feng, Z
Source: Scripta Materialia; June 2006; v.54, no.11, p.1859-1864
87. **Thermodynamics of open two-phase systems with coherent interfaces: Application to metal-hydrogen systems**
Schwarz, RB; Khachatryan, AG
Source: Acta Materialia; Jan. 2006; vol.54, no.2, p.313-23
88. **Ultrafast dynamics of the itinerant antiferromagnet UNiGa₅**
Chia, EEM; Lee, HJ; Hur, N; Bauer, ED; Durakiewicz, T; Averitt, RD; Sarrao, JL; Taylor, AJ
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89. **Using Fermi choppers to shape the neutron pulse**
Peters, J; Champion, JDM; Zsigmond, G; Bordallo, HN; Mezei, F
Source: Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment; Feb 15 2006; v.557, no.2, p.580-584
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Fitzsimmons, MR; Park, S; Dumesnil, K; Dufour, C; Pynn, R; Borchers, JA; Rhyne, JJ; Mangin, P
Source: PHYSICAL REVIEW B; APR 2006; v.73, no.13, p.134413

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Siegel, DI; Glaser, PH; So, J; Janecky, DR
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93. **Engineering and characterization of a superfolder green fluorescent protein**
Pedelacq, JD; Cabantous, S; Tran, T; Terwilliger, TC; Waldo, GS
Source: Nature Biotechnology; January 2006; v.24, no.1, p.79-88
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Priester, JH; Olson, SG; Webb, SM; Neu, MP; Hersman, LE; Holden, PA
Source: Applied and Environmental Microbiology; March 2006; v.72, no.3, p.1988-1996
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Lichtner, PC; Carey, JW
Source: GEOCHIMICA ET COSMOCHIMICA ACTA; MAR 15 2006; v.70, no.6, p.1356-1378
96. **Molecular actinide-tellurium bond and comparison of bonding in [M-III{N(TePiPr₂)₂}₃] (M = U, La)**
Gaunt, AJ; Scott, BL; Neu, MP
Source: ANGEWANDTE CHEMIE-INTERNATIONAL EDITION; 2006; v.45, no.10, p.1638-1641
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Source: Nature Reviews Microbiology; FEB 2006; v.4, no.2, p.102-112
98. **Optical imaging of light-evoked fast neural activation in amphibian retina**
Yao, Xin-Cheng; George, John S.
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Han, CS; Xie, G; Challacombe, JF; Altherr, MR; Bhotika, SS; Bruce, D; Campbell, CS; Campbell, ML; Chen, J; Chertkov, O; et. al.
Source: JOURNAL OF BACTERIOLOGY; MAY 2006; v.188, no.9, p.3382-3390
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Reilly, SD; Neu, MP
Source: INORGANIC CHEMISTRY; FEB 20 2006; v.45, no.4, p.1839-1846
101. **Synthesis, capillary crystallization and preliminary joint X-ray and neutron crystallographic study of Z-DNA without polyamine at low pH**
Langan, P; Li, XM; Hanson, BL; Coates, L; Mustyakimov, M
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102. **Three-dimensional elemental imaging using a confocal X-ray fluorescence microscope**
Patterson, BM; Havrilla, GJ
Source: AMERICAN LABORATORY; APR 2006; v.38, no.8, p.15-+
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Wada, M; Nishiyama, Y; Langan, P
Source: MACROMOLECULES; APR 18 2006; v.39, no.8, p.2947-2952

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104. **Common suppression pattern of eta and pi(0) mesons at high transverse momentum in Au plus Au collisions at root SNN=200 GeV**

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Adler, SS; Afanasiev, S; Aidala, C; Ajitanand, NN; Akiba, Y; Alexander, J; Amirikas, R; Aphecetche, L;
Aronson, SH; Averbeck, R; et. al.
Source: PHYSICAL REVIEW LETTERS; MAY 26 2006; v.96, no.20, p.202301

105. Cross section measurements for neutron-induced reactions in Ti, Fe and Ni at several neutron energies ranging from 70.7 to 151.6 MeV

Sisterson, JM; Chadwick, MB

Source: Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms; April 2006; v.245, no.2, p.371-378

106. Evaluation and propagation of the Pu-239 fission cross-section uncertainties using a Monte Carlo technique

Kawano, T; Hanson, KM; Frankle, S; Talou, R; Chadwick, MB; Little, RC

Source: NUCLEAR SCIENCE AND ENGINEERING; MAY 2006; v.153, no.1, p.1-7

107. Improved measurement of double helicity asymmetry in inclusive midrapidity $\pi(0)$ production for polarized p+p collisions at root s=200 GeV

Adler, SS; Afanasiev, S; Aidala, C; Ajitanand, NN; Akiba, Y; Al-Jamel, A; Alexander, J; Aoki, K; Aphecetche, L; Armendariz, R; et. al.

Source: PHYSICAL REVIEW D; MAY 2006; v.73, no.9, p.091102

108. J/psi production and nuclear effects for d+Au and p+p collisions at root S-NN=200 GeV

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109. Measurement of identified $\pi\{sup 0\}$ and inclusive photon second-harmonic parameter $v\{sub 2\}$ and implications for direct photon production in square root $s\{sub NN\}=200$ GeV Au+Au.

Adler, SS; Afanasiev, S; Aidala, C; Ajitanand, NN; Akiba, Y; Alexander, J; Amirikas, R; Aphecetche, L; Aronson, SH; Averbeck, R; et. al.

110. Measurement of the response of a Ga solar neutrino experiment to neutrinos from a Ar-37 source

Abdurashitov, JN; Gavrin, VN; Girin, SV; Gorbachev, VV; Gurkina, PP; Ibragimova, TV; Kalikhov, AV; Khairmasov, NG; Knodel, TV; Matveev, VA; et. al.

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Lemaire, S.; Talou, P.; Kawano, T.; Chadwick, MB; Madland, DG

Source: Physical Review C (Nuclear Physics); Jan. 2006; vol.73, no.1, p.14602-1-9

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Mei, DM; Hime, A

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Reifarh, R; Esch, EI; Alpizar-Vicente, A; Bond, EM; Bredeweg, TA; Glover, SE; Greife, U; Hatarik, R; Haight, RC; Kronenberg, A; et. al.

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Rundberg, RS; Bredeweg, TA; Bond, EM; Haight, RC; Hunt, LF; Kronenberg, A; O'Donnell, JM; Schwantes, JM; Ullmann, JL; Vieira, DJ; et. al.

Source: AIP CONFERENCE PROCEEDINGS; 2006; v.819, p.312-317

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Giacri-Mauborgne, ML; Ridikas, D; Chadwick, MB; Young, PG; Wilson, WB
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117. **Pulse shape analysis in segmented detectors as a technique for background reduction in Ge double-beta decay experiments**
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Torgerson, JR; Lamoreaux, SK
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119. **Sensitivity of condensed-matter P- and T-violation experiments**
Budker, D; Lamoreaux, SK; Sushkov, AO; Sushkov, OP
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120. **Simultaneous measurement of (n,gamma) and (n,fission) cross sections with the DANCE 4 pi BaF2 array**
Bredeweg, TA; Fowler, MM; Becker, JA; Bond, EM; Chadwick, MB; Clement, RRC; Esch, EI; Ethvignot, T; Granier, T; Hunt, LF; et. al.
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121. **Single electrons from heavy-flavor decays in p + p collisions at root s=200 GeV**
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Boulay, MG; Hime, A
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Rasmussen, CE; Sottile, MJ; Shende, SS; Malony, AD
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124. **A case for new MPI fortran bindings**
Rasmussen, CE; Squyres, JM
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125. **Convergence of mimetic finite difference method for diffusion problems on polyhedral meshes with curved faces**
Brezzi, F; Lipnikov, K; Shashkov, M
Source: MATHEMATICAL MODELS & METHODS IN APPLIED SCIENCES; FEB 2006; v.16, no.2, p.275-297
126. **Differential susceptibility and infectivity epidemic models**
Hyman, JM; Li, J
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127. **The error-minimization-based rezone strategy for Arbitrary Lagrangian-Eulerian methods**
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Hendriks, EA; Minnich, RG
Source: JOURNAL OF SUPERCOMPUTING; MAY 2006; v.36, no.2, p.171-181
129. **The mimetic finite difference discretization of diffusion problem on unstructured polyhedral meshes**
Lipnikov, K; Shashkov, M; Svyatskiy, D
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Margolin, LG; Shashkov, M
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Rickett, CD; Choi, SE; Rasmussen, CE; Sottile, MJ
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133. **High-density field-reversed configuration plasma for magnetized target fusion**
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134. **Laser acceleration of quasi-monoenergetic MeV ion beams**
Hegelich, BM; Albright, BJ; Cobble, J; Flippo, K; Letzring, S; Paffett, M; Ruhl, H; Schreiber, J; Schulze, RK; Fernandez, JC
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136. **MHD equilibrium reconstruction in the presence of correlated data**
Jones, CS; Finn, JM
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137. **Microparticle probes for laboratory plasmas**
Wang, ZH; Ticos, CM; Dorf, LA; Wurden, GA
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142. **An overview of USITER test blanket module program**
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144. **Progress in heavy ion-driven target fabrication and injection**
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146. **Specification of monitor metrics for generating vector field-aligned numerical grids**
Glasser, AH; Liseikin, VD; Kitaeva, IA
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147. **Transverse characteristics of short-pulse laser-produced ion beams: a study of the acceleration dynamics.**
Brambrink, E; Schreiber, J; Schlegel, T; Audebert, P; Cobble, J; Fuchs, J; Hegelich, M; Roth, M
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Yongzhong Xu; Kronberg, PP; Habib, S.; Dufton, QW
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Heitmann, K; Lukic, Z; Habib, S; Ricker, PM
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150. **Constraints on the progenitor of Cassiopeia A**
Young, PA; Fryer, CL; Hungerford, A; Arnett, D; Rockefeller, G; Timmes, FX; Voit, B; Meakin, C; Eriksen, KA
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154. **Kink stochasticity**
Lythe, G; Habib, S
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155. **A measurement of time-averaged aerosol optical depth using air-showers observed in stereo by HiRes**
Abbasi, RU; Abu-Zayyad, T; Amann, JF; Archbold, G; Atkins, R; Belov, K; Belz, JW; BenZvi, S; Bergman, DR; Boyer, JH; et. al.
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157. **Nonlinear quantum dynamics**
Habib, S
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158. **Particle physics - The first axion?**
Lamoreaux, S
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Gupta, R; Vaidya, DB; Bobbie, JS; Chylek, P
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162. **Shapes and sizes of voids in the Lambda cold dark matter universe: excursion set approach**
Shandarin, S; Feldman, HA; Heitmann, K; Habib, S
Source: MONTHLY NOTICES OF THE ROYAL ASTRONOMICAL SOCIETY; APR 21 2006; v.367, no.4, p.1629-1640
163. **SNSPH: A parallel three-dimensional smoothed particle radiation hydrodynamics code**
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164. **Techniques for measuring atmospheric aerosols at the high resolution fly's eye experiment**
Abbasi, R; Abu-Zayyad, T; Amann, JF; Archbold, GC; Belov, K; BenZvi, S; Belz, JW; Bergman, DR; Boyer, J; Cannon, CT; et. al.
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165. **Tightening constraints from the Ly alpha forest with the flux probability distribution function**
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