Peer-reviewed Journal Papers


Papers under review


Book Chapters/Invited Papers/Patents/News Items


44. Institute of Physics featured item “60 seconds with the Authors, Editors Interview” http://www.iop.org/EJ/journal/page=featauth/-author=756/0957-4484 for our paper in Nanotechnology, v18, p485606 (2007).

Papers on Physics/Condensed Matter ArXiV


(d) Effects of solid state material transport on pulsed laser processing of thin metal films Authors: Christopher Favazza, Hare Krishna, Ramki Kalyanaraman, Radhakrishna Sureshkumar, cond-mat/0703016 (2007).


(f) Justin Trice, Dennis Thomas, Christopher Favazza, Radhakrishna Sureshkumar and Ramki Kalyanaraman, Investigation of pulsed laser induced dewetting in nanoscopic metal films: Thermal modeling and experiments, cond-mat/0609182 (2006).

(g) Christopher Favazza, Ramki Kalyanaraman, and Radhakrishna Sureshkumar, Robust nanopatterning by laser-induced dewetting of metal nanofilms, cond-mat/0609178 (2006).

Contributed Conference Papers


67. D. Kumar, R. Kalyanaraman, J. Narayan and D. Christen, *Giant Magnetoresistance Phenomenon in Laser Ablated La$_{0.6}$Y$_{0.07}$Ca$_{0.33}$MnO$_x$ Thin Films*, MRS Proc., 397, 241 (1996).

**Invited Presentations**


70. International workshop: Nanopatterning via Ions, Photon beam and Epitaxy, Sestri Levante (Italy), *Self-organization of metal nanopatterns through laser induced hydrodynamic flow: An experimental and computational study* (September 2007).


73. Truman State University, Dept. of Physics, *Self-organized patterns from fast (nanosecond) metal dewetting* (April 07)


75. Univ. of Toronto, Canada, Dept. of Physics, *Self-organized patterns in nanoscopic metal films* (March 07).

76. Univ. of Tennessee, Knoxville, Dept. of Chemical Engineering, *Pattern formation in nanoscopic metal films* (December 06).
Contributed Presentations


92. APS March meeting (New Orleans 2008), J. Trice, R. Sureshkumar, Ramki Kalyanaraman, and H. Garcia, Multimetal plasmonic nanomaterials for solar energy harvesting.


95. MRS Fall meeting (Boston, November 2007) - C. Favazza, J. Trice, R. Sureshkumar, and R. Kalyanaraman, *Dynamics of pattern formation in ultrathin metal films under multiple nanosecond pulse laser melting.*


100. AIChe (Salt Lake City, November 2007) - J. Trice, C. Favazza, R. Kalyanaraman, R. Sureshkumar, H. Garcia, Metal-Dielectric Nanocomposites For Solar Energy Applications.

101. SPIE Optics + Photonics (San Diego, August 2007) - C. Favazza, R. Kalyanaraman, R. Sureshkumar, Robust and novel nanomanufacturing via laser-induced self-organization of metallic nanostructures.


105. APS March meeting (Baltimore, 2006) - J. Trice, C. Favazza, R. Sureshkumar, R. Kalyanaraman, Experiment and simulation of laser dewetting induced pattern formation.


108. AIChe (San Francisco, November 2006) - C. Favazza, J. Trice, H. Krishna, R. Kalyanaraman, and R. Sureshkumar, Nanomanufacturing Via Laser-Induced Hydrodynamic Instabilities in Metal Films.

109. MRS Fall meeting (Boston, December 2006) - A.K. Gangopadhyay, C. Favazza, L. Longstreth, R. Kalyanaraman (Presenter), C. Miller, R. S. Indeck, Patterned magnetic nanostructures by partial crystallization of amorphous alloys on patterned catalytic nanoparticles.

110. MRS Fall meeting (Boston, December 2006) - C. Favazza, R. Kalyanaraman and R. Sureshkumar, Dewetting and Pattern Formation in Nanoscopic Metal Films: A Theoretical Perspective.

111. MRS Fall meeting (Boston, December 2006) - L. L-Spoor, P.C. Gibbons, K. F. Kelton and R. Kalyanaraman, Observation of epitaxy of cubic TiB$_2$ on Si(001) by pulsed laser ablation.


113. MRS Fall meeting (Boston, December 2006) - H. Krishna, C. Favazza, R. Sureshkumar, and R. Kalyanaraman, Dewetting pattern nanomorphology in single-layer and multi-layer metal films under pulsed laser irradiation.


115. MRS Fall meeting (Boston, December 2005) - C. Favazza J. Trice and R. Kalyanaraman, Towards laser-based nanomanufacturing of ordered metal nanoclusters.
116. APS March meeting (Los Angeles, 2005) - W. Zhang, C. Zhang, and R. Kalyanaraman, *Dynamic spatial ordering of nanostructures: Co on Si (or SiO$_2$)*.


118. MRS Fall meeting (Boston, December 2003) - C. Zhang, D. Sethna, R. Kalyanaraman, *In-situ lateral patterning of Cobalt thin films during pulsed laser deposition*.


130. MRS Fall meeting (Boston, December 1997) - D.E. Moxey, R. Kalyanaraman, R.D. Vispute, J. Narayan, K. Jagannadham and C.B. Lee, *Analysis of High-Tc Ag-doped and Undoped YBCO Superconducting bolometers fabricated on MgO(100) and YSZ/Si(100)*.


133. MRS Fall meeting (Boston, December 1996) - R. Kalyanaraman, D.E. Moxey, A.K. Sharma, R.D. Vispute, S. Oktyabrsy, K. Jagannadham and J. Narayan, *Effect of Ag Doping on the Structure and Transport Properties of YBCO/YSZ/Si(100) and YBCO/MgO(100) Films Grown by PLD.*
