Dr. Ralu Divan
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Research Summary:

- Development of high resolution, high aspect ratio lithographic processes
- Development of etching and growth processes for advanced micro- and nano-devices
- Characterizing chemical and lithographic properties of materials
- Synthesis of nanoparticles and their use in micro-/nanodevices
- Characterizing interfacial and compatibility properties of materials used in MEMS and NEMS
- Development of membrane-based devices

Selected recent publications:

"DC Current Tunable Noise Suppressor using Sub-micrometer Patterned Permalloy Films," B.M. Farid Rahman, R. Divan, H. Zhang, d. Rosenmann, Y. Peng, X. Wang, G. Wang, J. Appl. Physics, 115, 17E515 (2014)

"High-aspect-ratio nanoporous membranes made by reactive ion etching and e-beam and interference lithography," R. Divan, O.V. Makarova, S. Skoog, R. Narayan, A.V. Sumant, C-Mei Tang, N. Moldovan, Microsyst Technol, on-line Oct. 2013

"Optimizing nanofountain probe microfabrication enables large scale nanopatterning," A. Safi, W. Kang, D. Czaplevski, R.Divan, N. Moldovan, H.D. Espinosa, J. Micromech. Microeng 23(12) 2013

"Metal-assisted etching of silicon molds for electroforming," R**.** Divan, D. Rosenthal, K. Ogando, L.E. Ocola, D. Rosenmann, N. Moldovan, JVST B 31(6), Nov/Dec 2013

"Nanopatterning of ultrananocrystalline diamond nanowires," X. Wang, L.E. Ocola, R. Divan, A. V. Sumant, Nanotechnology, 23, 075301, Feb 2012

Elucidating Chemical and MorphologicalChanges in Tetrachloroauric Solutions Induced by X-ray Photochemical Reaction, Q. Ma, R. Divan, D.C. Mancini, D.T. Keane - J.Phys.Chem.A. 112(20), 4568-4572, 2008