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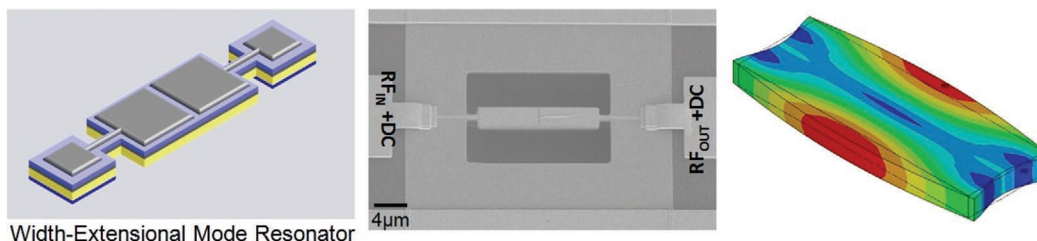
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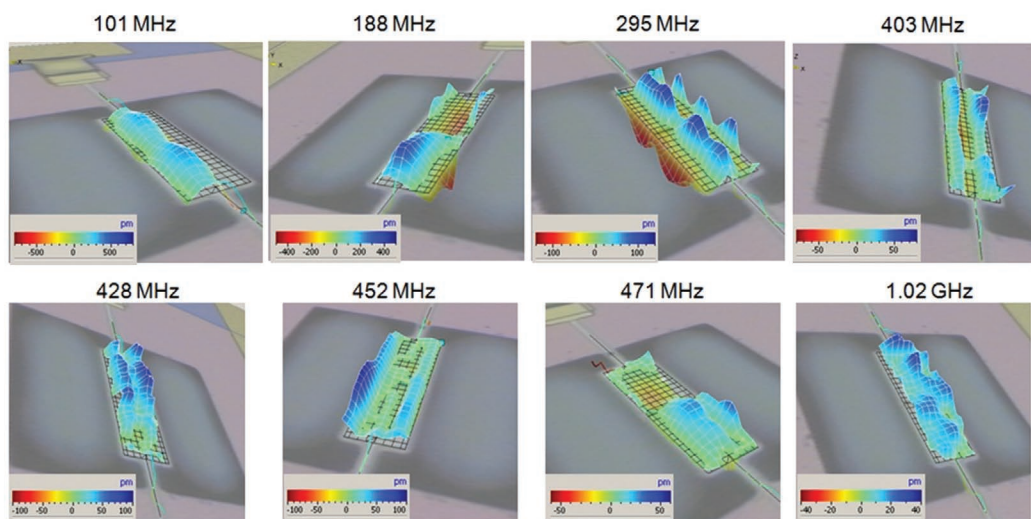
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Width-Extensional Mode Resonator



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Heterodyne Laser-Doppler Interferometric Imaging of Contour-Mode Resonators

A novel heterodyne laser-Doppler interferometric measurement system has been developed to characterize PZT transduced width-extensional-mode resonators with resonance frequency above 1 GHz. For the first time, a technique to measure resonance frequencies and vibrations of contour-mode resonators optically up to 1.2 GHz using only a 618 MHz carrier frequency was demonstrated.

Images courtesy of Hengky Chandralim, Sunil Bhave, Ron Polcawich, Jeffrey Pulskamp, Sebastian Boedecker, Babak Pourat, and Christian Rembe. H. Chandralim is with the Swiss Federal Institute of Technology Zurich, Micro and Nanosystems, Zurich, Switzerland. S. Bhave is with Cornell University, School of Electrical and Computer Engineering, Ithaca, NY. R. Polcawich and J. Pulskamp are with the Army Research Laboratory, Micro-Devices Branch, Adelphi, MD. S. Boedecker, B. Pourat, and C. Rembe are with Polytec GmbH, R&D, Waldbronn, Germany.