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### Acoustomigration Under the Microscope

The cover image is an artistic rendering of the damaging effect of a standing wavefield on a thin aluminum film. Stress induced material transport in SAW devices, so-called acoustomigration, is a prominent failure mechanism, especially in high-power applications. We present the quantitative calculation of the stress in the metal film employing a P-matrix model in combination with the Partial Wave Method. This approach provides the flexibility to determine the stress at any given point in a SAW device.

We used scanning probe microscopy techniques to study acoustomigration of metal structures *in-situ*, i.e. during the high-power loading of the device. Scanning Acoustic Force Microscopy (SAFM) allows for the simultaneous measurement of the acoustic wavefield and the topography with submicron lateral resolution.

Image courtesy of Thorsten Hesjedal of the Paul Drude Institute for Solid-State Electronics in Berlin, Germany. Special thanks for the artwork goes to Roman Engel-Herbert and Tonia Stengelin. See article on page 1584.

## LEGEND FOR ICONS



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