OPTICS

Mighty Microplasma

TERAHERTZ TECHNIQUES: A microplasma generated by focusing intense laser pulses is captured in mid-air during a demonstration in the lab of optics PhD student Fabrizio Buccheri and Institute of Optics Director Xi-Cheng Zhang. In work published this spring, the Rochester team showed that such microplasma—which emit terahertz radiation, a form of electromagnetic radiation named for its frequency—could be created with much lower-powered lasers than previously thought possible. The terahertz radiation emitted by the microplasma could be used to analyze materials, such as identifying poisons in food or finding drugs and explosives in baggage. PHOTOGRAPH BY ADAM FENSTER