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Pulse-Length Effects in Laser-Induced Breakdown Spectroscopy of Plant Materials JEREMY KUNZ, BRIAN KO, DMITRI VORONINE, ALEXEI SOKOLOV, Baylor University, Texas AM University, MARLAN SCULLY, Baylor University, Texas AM University, Princeton University — Duration of laser pulses play a critical role in laser-induced breakdown spectroscopy (LIBS). Not only does pulse-length influence the emission of the produced plasma, but also effects the interaction of light with the material surfaces. As a consequence, various pulselength durations may be chosen depending upon the needs and application of the LIBS analysis. We examine nano-, pico-, and femtosecond pulse-length LIBS of plants.

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