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Synthesis of nitrogen-based materials using nanosecond-pulsed plasma in liquid nitrogen DANIL DOBRYNIN, ROMAN RAKHMANOV, ALEXANDER FRIDMAN, Drexel University — The application of strong electric fields in water and organic liquids has been studied for many years, because of its importance in electrical transmission processes and its practical applications in biology, chemistry, and electrochemistry. More recently, liquid-phase electrical discharges have been investigated, and are being developed. Here we present the first results on characterization and diagnostics of nanosecond-pulsed discharge in liquid nitrogen and characterization of produced materials. * This work is supported by the Army Research Office (grant # W911NF-17-1-0597, PI: Dobrynin).

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