Abstract Submitted
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Study of an optical emission in the laser ablation plume of boron-rich target[1] SHURIK YATOM, Princeton Plasma Physics Laboratory, ALEXANDER KHRABRYI, IGOR KAGANOVICH, YEVGENY RAITSES, Princeton University, Princeton Plasma Physics Laboratory, LOW-TEMPERATURE PLASMA GROUP TEAM — The work presented here studies the laser ablation of B and BN targets in vacuum and nitrogen atmosphere. The investigation of excited species present in the ablation plume and the characterization of plasma parameters is done by means of spatiotemporally resolved optical emission spectroscopy. The results show formation of BN and B2N molecules from the feedstock supplied by ablation of the target in the vacuum case and from the surrounding gas in the case of boron target in nitrogen. The domination of B2N molecular species validates the simulation results reported in Ref.1 and positions the B2N molecules as important part of BN nanotube synthesis.

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