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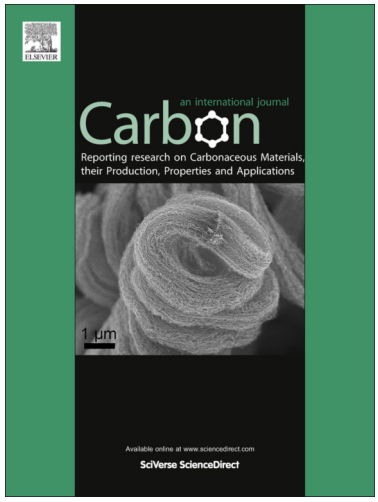

Letter to the Editor

Carbon nanodots with strong nonlinear optical response

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Carbon nanodots with strong nonlinear optical response

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Abstract The carbon nanodots (CNDs) were synthesized by a simple method of femtosecond laser ablation of bagasse in ethanol. Strong optical limiting effects of as-prepared CNDs to 800 nm femtosecond laser pulses were observed with the threshold of 74 mJ/cm^2. The strong two photon absorption of CNDs is responsible for the optical limiting response. The nonlinear coefficient was determined by the open-aperture Z-scan technique.

Luminescent carbon nanodots (CNDs) with the size in the range 1-10 nm stand for a new class of carbon-based nanomaterials and have attracted tremendous interest due to their unique properties [1]. CNDs with tunable band gap, stable photoluminescence (PL), easy functionality, excellent biocompatibility, and lower cytotoxicity offer excellent potential candidates for various applications [1,2]. Unfortunately, though extensive efforts have been devoted to the synthesis and optical property investigations of CNDs, the research of the nonlinear optical (NLO) response to ultra-fast

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