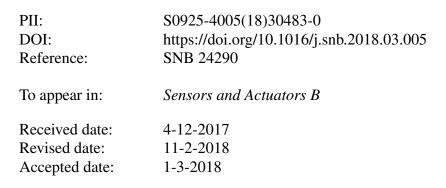
Accepted Manuscript

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Please cite this article as: Wanjun Hu, Yunyun Huang, Chaoyan Chen, Yuke Liu, Tuan Guo, Bai-Ou Guan, Highly sensitive detection of dopamine using a graphene functionalized plasmonic fiber-optic sensor with aptamer conformational amplification, Sensors and Actuators B: Chemical https://doi.org/10.1016/j.snb.2018.03.005

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Highly sensitive detection of dopamine using a graphene functionalized plasmonic fiber-optic sensor with aptamer conformational amplification

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Highlights

- A plasmonic optical fiber grating sensor detects dopamine variations in human serum.
- Aptamer conformational transition improves the sensor sensitivity and selectivity.
- Limit of detection is 10⁻¹³ M and measurement range with a linear response from 10⁻¹³ to 10⁻⁸ M.
- The sensor is compact in size and provides temperature/power self-calibration ability.

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