

## Accepted Manuscript

Title: Down's syndrome screening with hydrogel photonic barcodes

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PII: S0925-4005(17)31745-8  
DOI: <http://dx.doi.org/10.1016/j.snb.2017.09.079>  
Reference: SNB 23170

To appear in: *Sensors and Actuators B*

Received date: 8-5-2017  
Revised date: 30-8-2017  
Accepted date: 13-9-2017

Please cite this article as: Hui Xu, Jingyin Zhang, Yueshuang Xu, Huan Wang, Fanfan Fu, Qionghua Xu, Yunlang Cai, Down's syndrome screening with hydrogel photonic barcodes, *Sensors and Actuators B: Chemical* <http://dx.doi.org/10.1016/j.snb.2017.09.079>

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## Down's syndrome screening with hydrogel photonic barcodes

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### Highlights

- Hydrogel photonic barcodes with different reflection peak for multiplex detection.
- Concentration-optimized poly ethylene glycol for biomolecules diffusing and reaction.
- Highly sensitivity and stability were showed in detection of Down's syndrome.

### Abstract:

For giving birth to a healthy baby without Down's syndrome, screening the level of alpha fetoprotein (AFP) and free-beta human chorionic gonadotropin ( $\beta$ -hCG) in maternal serum has been a routine examination for all gravidas. However, many assays

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