

## Accepted Manuscript

Title: A Novel Dual Energy Transfer Probe for Intracellular mRNA Detection with High Robustness and Specificity

Authors: Bin Wang, Zhuyuan Chen, Dahai Ren, Zheng You

PII: S0925-4005(18)31770-2  
DOI: <https://doi.org/10.1016/j.snb.2018.10.007>  
Reference: SNB 25440

To appear in: *Sensors and Actuators B*

Received date: 12-6-2018  
Revised date: 3-9-2018  
Accepted date: 4-10-2018



Please cite this article as: Wang B, Chen Z, Ren D, You Z, A Novel Dual Energy Transfer Probe for Intracellular mRNA Detection with High Robustness and Specificity, *Sensors and amp; Actuators: B. Chemical* (2018), <https://doi.org/10.1016/j.snb.2018.10.007>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

# A Novel Dual Energy Transfer Probe for Intracellular mRNA Detection with High Robustness and Specificity

Bin Wang<sup>a</sup>, Zhuyuan Chen<sup>b</sup>, Dahai Ren<sup>a,\*</sup>, Zheng You<sup>a</sup>

<sup>a</sup> State Key Laboratory of Precision Measurement Technology and Instruments, Department of Precision Instrument, Tsinghua University, Beijing, 100084, China

<sup>b</sup> Department of Basic Sciences, Tsinghua University School of Medicine, Beijing, 100084, China

\*To whom correspondence should be addressed. Tel: +86-010-62776000;

*E-mail: rendh@tsinghua.edu.cn (D. Ren).*

## Research Highlights

- Title: A Novel Dual Energy Transfer Probe for Intracellular mRNA Detection with High Robustness and Specificity
- Bin Wang, Zhuyuan Chen, Dahai Ren\*, Zheng You
- Highlights:
- The proposed dual energy transfer probe for intracellular mRNA detection eliminates nuclease degradation-induced false positive results.
- Detection of mRNA without amplification at sub-nM level was achieved.
- The impact of anti-tumor drugs on the expression of tumor-specific survivin gene in living cells was first studied.
- The probe shows higher stability than conventional molecular beacons inside living cells.

Download English Version:

<https://daneshyari.com/en/article/11016384>

Download Persian Version:

<https://daneshyari.com/article/11016384>

[Daneshyari.com](https://daneshyari.com)