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*Supplement of*

## **Development and characterisation of a new fluorescence sensor for online monitoring of bioprocesses**

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## Supplementary material

### 1. Autoclavable adaptor

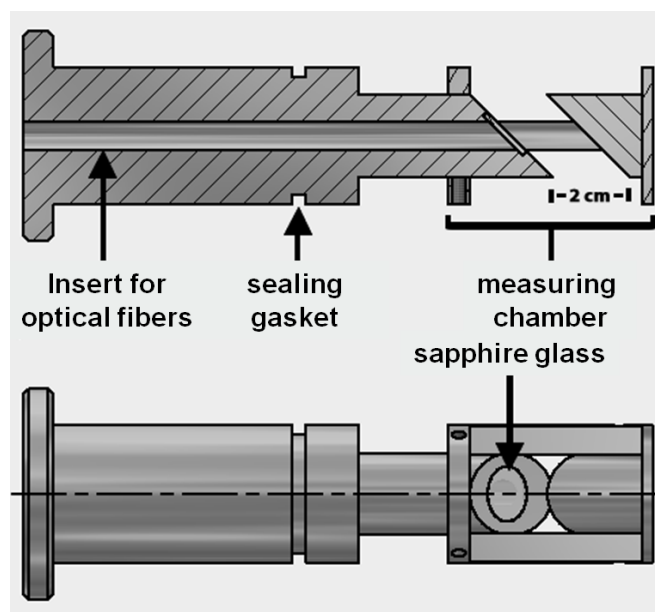


Figure S1: Autoclavable adaptor for the probe of the sensor fitting into an Ingold port.

### 2. Design of Experiments (DoE)

Table S1: DoE calculated mixtures of BSA, NADH and riboflavin for selectivity test.

BSA (mol l <sup>-1</sup> )	NADH (mol l <sup>-1</sup> )	riboflavin (mol l <sup>-1</sup> )
1x10 <sup>-6</sup>	1x10 <sup>-5</sup>	1x10 <sup>-6</sup>
0	0	0
5x10 <sup>-7</sup>	1x10 <sup>-4</sup>	1x10 <sup>-6</sup>
1x10 <sup>-7</sup>	1x10 <sup>-6</sup>	5x10 <sup>-7</sup>
1x10 <sup>-6</sup>	5x10 <sup>-5</sup>	1x10 <sup>-5</sup>
1x10 <sup>-5</sup>	1x10 <sup>-5</sup>	1x10 <sup>-7</sup>
1x10 <sup>-6</sup>	1x10 <sup>-5</sup>	1x10 <sup>-6</sup>
1x10 <sup>-7</sup>	0	0
0	1x10 <sup>-6</sup>	1x10 <sup>-7</sup>
5x10 <sup>-7</sup>	5x10 <sup>-6</sup>	1x10 <sup>-5</sup>
1x10 <sup>-5</sup>	1x10 <sup>-5</sup>	1x10 <sup>-6</sup>
1x10 <sup>-6</sup>	1x10 <sup>-4</sup>	5x10 <sup>-7</sup>

$1 \times 10^{-6}$	$1 \times 10^{-5}$	$1 \times 10^{-6}$
$1 \times 10^{-7}$	0	$1 \times 10^{-7}$
$1 \times 10^{-5}$	$1 \times 10^{-5}$	$5 \times 10^{-7}$
$1 \times 10^{-6}$	$5 \times 10^{-6}$	$1 \times 10^{-6}$
0	$1 \times 10^{-6}$	0
$5 \times 10^{-7}$	$1 \times 10^{-4}$	$1 \times 10^{-6}$
$1 \times 10^{-6}$	$1 \times 10^{-5}$	$1 \times 10^{-6}$

### 3. Loadings of the principle components

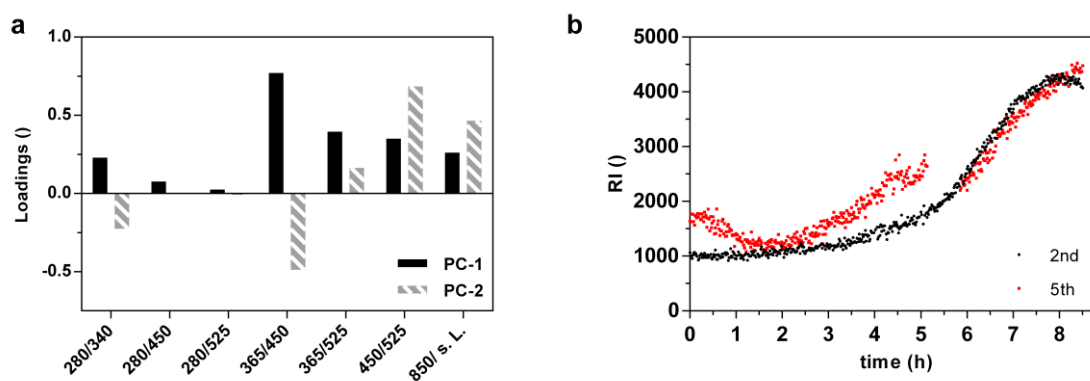


Figure S2: Loadings of PC-1 and PC-2 (a) and the scattered light (s.l.) of cultivation 2 and 5 (b).