## **Electronic Supplementary Information**

## Graphene Oxide Amplified Fluorescence Anisotropy for Label-Free Detection of Potassium Ion

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**Fig. S1** the size distributions and their percentages of the complex of GO, AO and ssDNA in the presence (A) and absence (B) of  $K^+$  as measured by dynamic light scattering (DLS). Concentrations: ssDNA, 40 nM; AO, 1  $\mu$ M; K<sup>+</sup>, 2 mM; GO, 12  $\mu$ g/mL.



**Fig. S2** Fluorescence anisotropy in the absence (light gray columns) and presence (dark gray columns) of K<sup>+</sup> with/without the subsequent addition of MWCNTs. Concentrations: AO, 1  $\mu$ M, K<sup>+</sup>: 2 mM; ssDNA: 40 nM; MWCNTs, 12  $\mu$ g/mL.



**Fig. S3** Fluorescence anisotropy in the absence (light gray columns) and presence (dark gray columns) of K<sup>+</sup> with/without the subsequent addition of MIL-101. Concentrations: AO, 1  $\mu$ M, K<sup>+</sup>: 1.5 mM; ssDNA: 40 nM; MIL-101, 80  $\mu$ g/mL.