Supplementary Materials

Smart Prussian Blue Analog Decorated with Zinc Oxide Nanohybrid: Fluorescent Sensing and Sustainability of Sunset Yellow in Food and Environment

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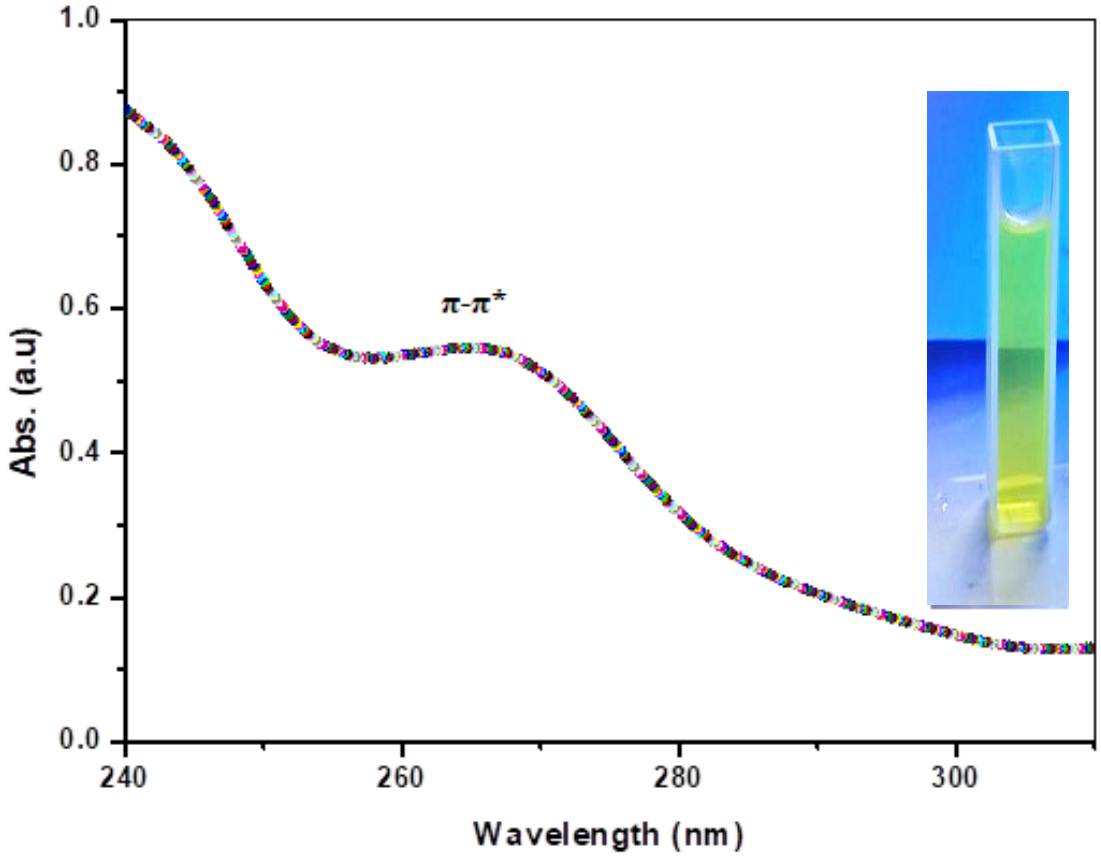


Figure S1: UV spectrum of PBA@ZnO nanohybrid (5.0 mg/mL) showing peak maximum at 270 nm.

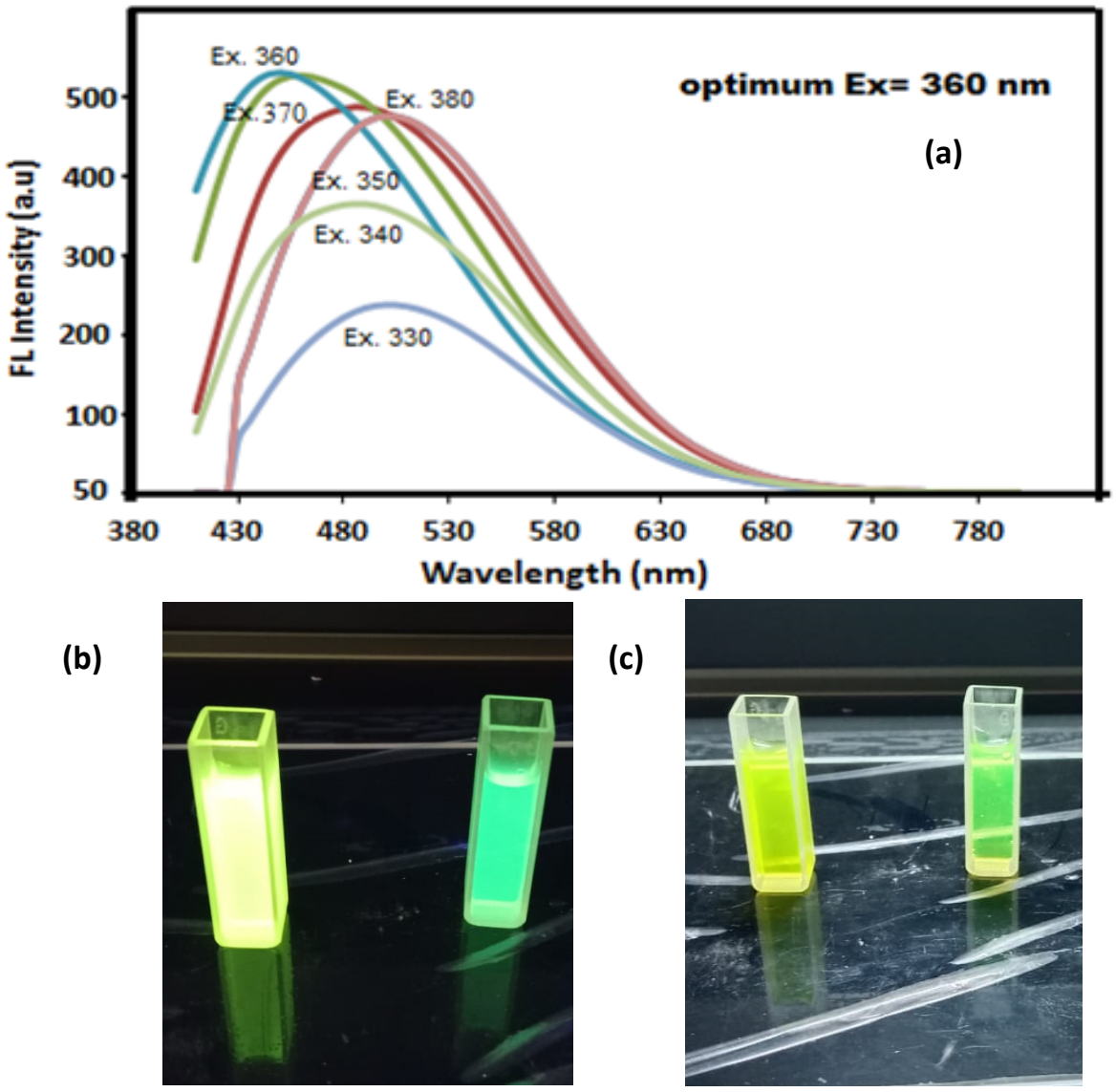


Figure S2: Fluorescence emission spectra of PBA@ZnO (5.0 mg/mL) nanohybrid at different excitation wavelengths (330-380 nm), and digital images of non-spiked PBA@ZnO under UV and white light (b&c left cuvette) and PBA@ZnO spiked with SY under UV and white light (b&c right cuvette), respectively.

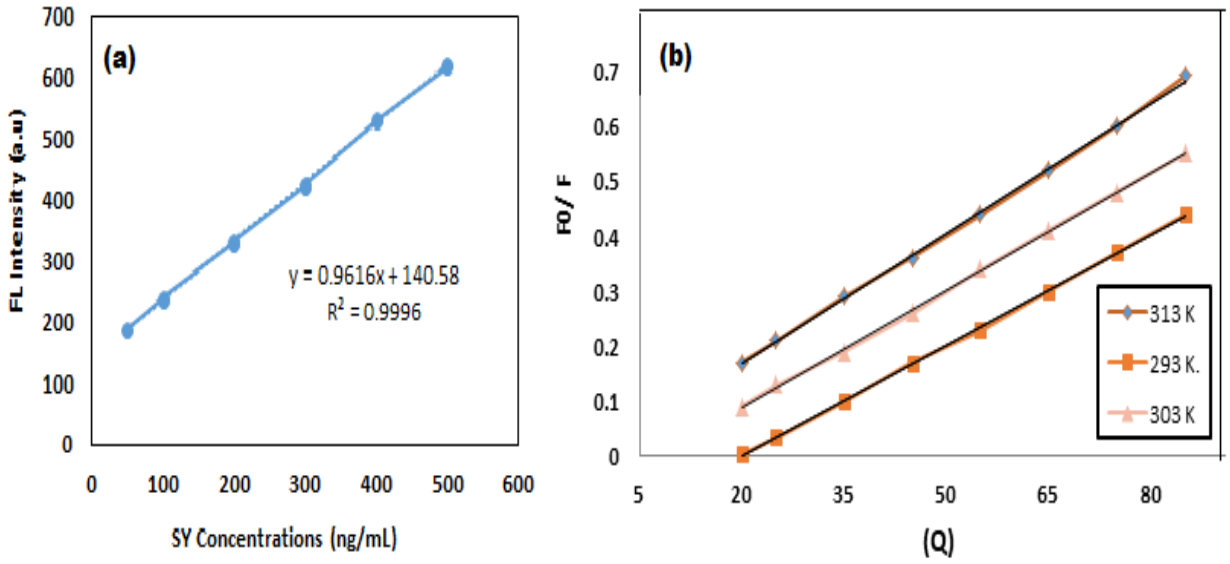


Figure S3: (a) Calibration curve of increasing concentrations of SY (0, 50, 100, 200, 300, 400, 500 ng/mL) using 0.5 mL of PBA@ZnO nanohybrid at pH 3, 1.5 mL of BR buffer, and the complete response was determined after 5 minutes, and (b) Stern-Volmer plot for the quenching effect of PBA@ZnO nanohybrid by SY at different temperatures (293, 303, 313 K).

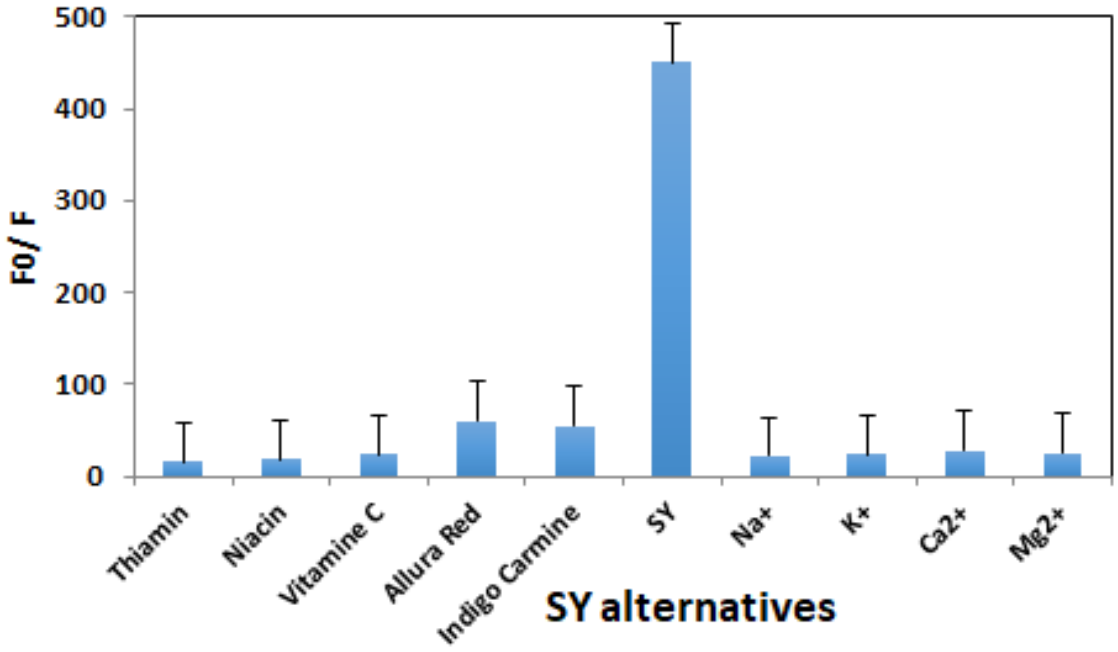


Figure S4: The selectivity of the proposed PBA@ZnO nanohybrid (100 ng/mL) with SY alternatives (1.0 μg/mL).

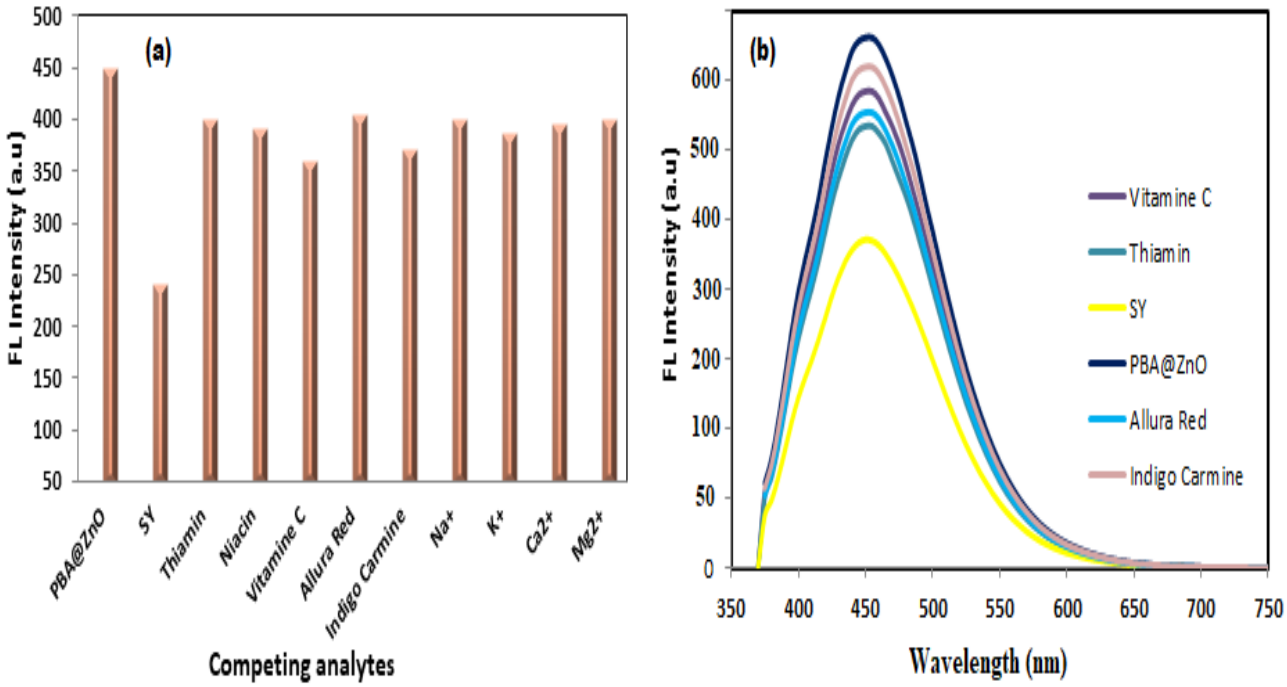


Figure S5: (a) the selectivity of the proposed PBA@ZnO nanohybrid (100 ng/mL) with competing analytes, (b) fluorescence titration with other analytes

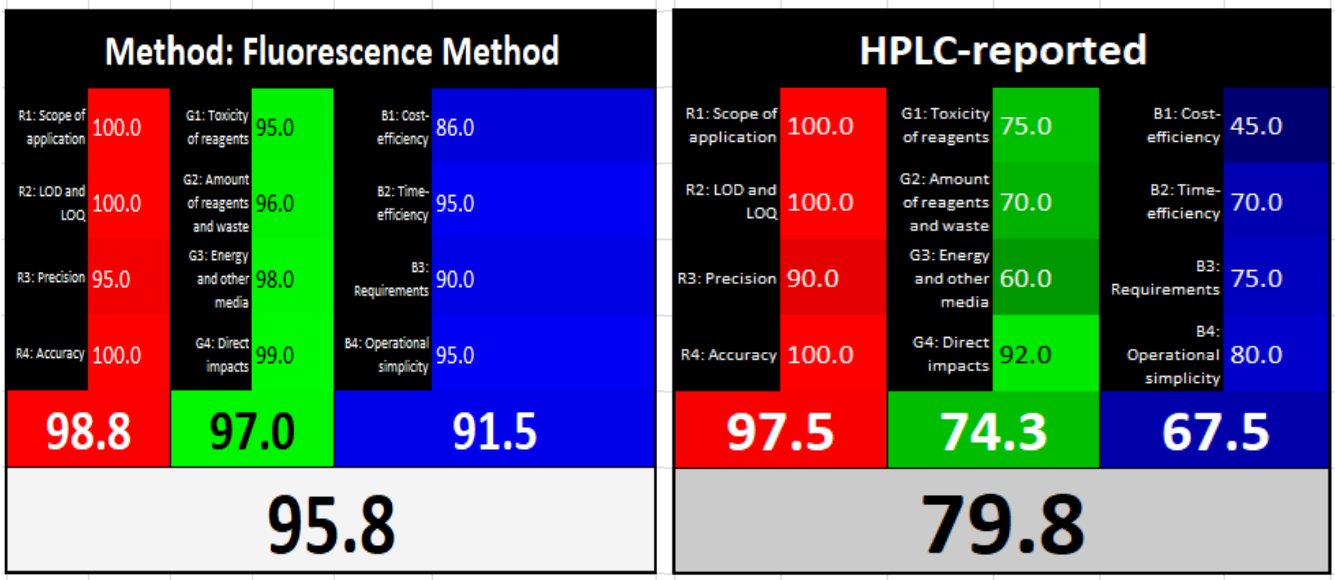


Figure S6: Comparison of RGB 12 algorithm of the suggested approach to the reported HPLC method [44].

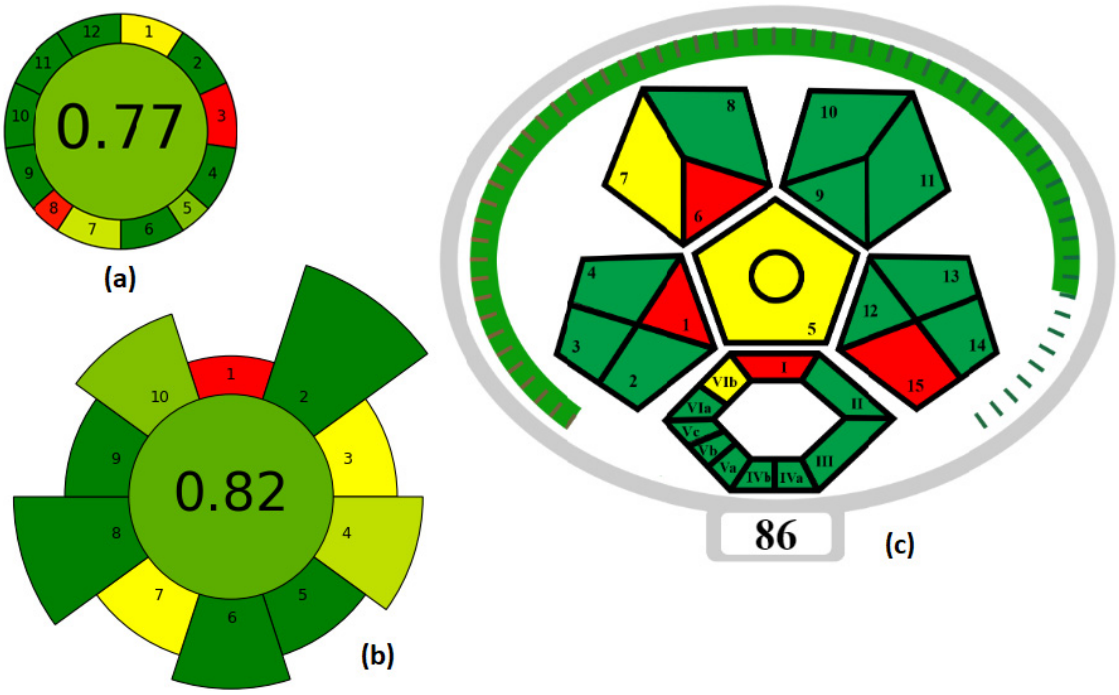


Figure S7: Assessment of the greenness profile of the proposed method by (a) AGREE, (b) AGREE prep, and (c) Complex MoGAPI.