

## SUPPLEMENTARY MATERIAL

### FLUORESCENCE STUDY OF RIBOFLAVIN INTERACTIONS WITH GRAPHENE DISPERSED IN BIOACTIVE TANNIC ACID

**María Paz San Andrés<sup>1,2\*</sup>, Marina Baños-Cabrera<sup>1</sup>, Lucía Gutiérrez-Fernández, Ana María Díez-Pascual<sup>1,2</sup>, Soledad Vera-López<sup>1,2</sup>.**

<sup>1</sup>Universidad de Alcalá, Facultad de Ciencias, Departamento de Química Analítica, Química Física e Ingeniería Química, Ctra. Madrid-Barcelona Km. 33.6, 28805 Alcalá de Henares, Madrid, España (Spain).

<sup>2</sup>Universidad de Alcalá, Instituto de Investigación Química Andrés M. del Río (IQAR), Ctra. Madrid-Barcelona Km. 33.6, 28805 Alcalá de Henares, Madrid, España (Spain).

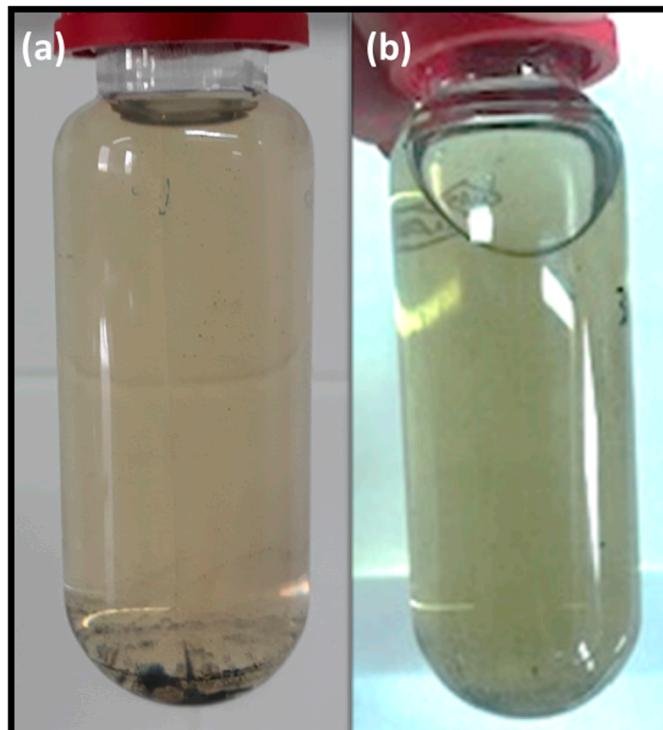
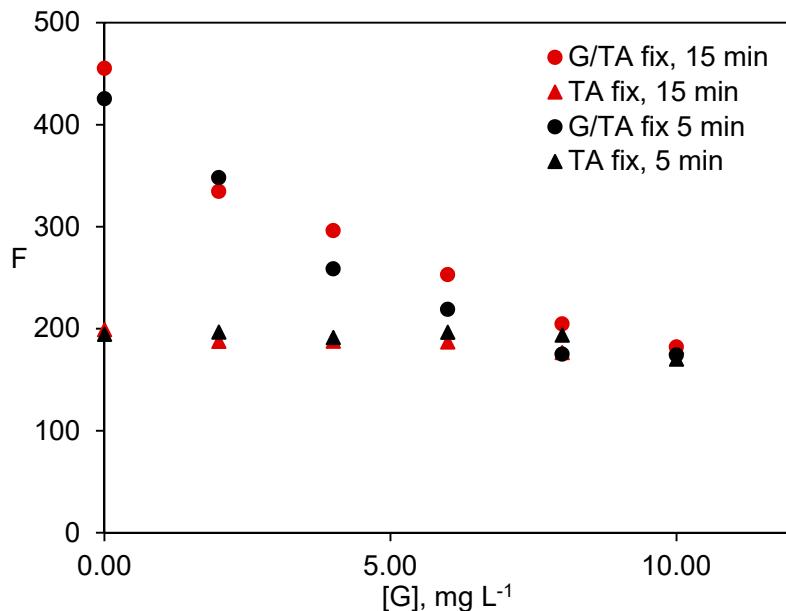
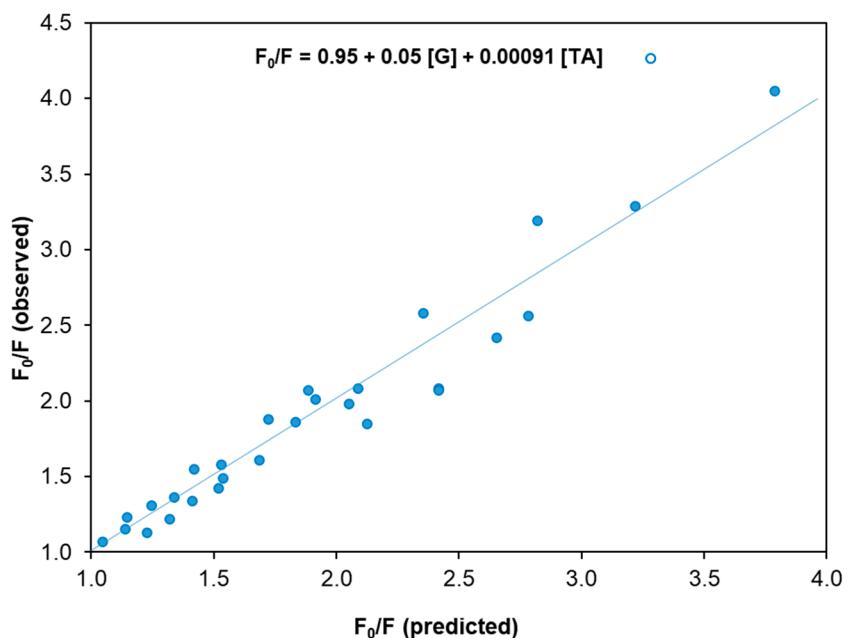


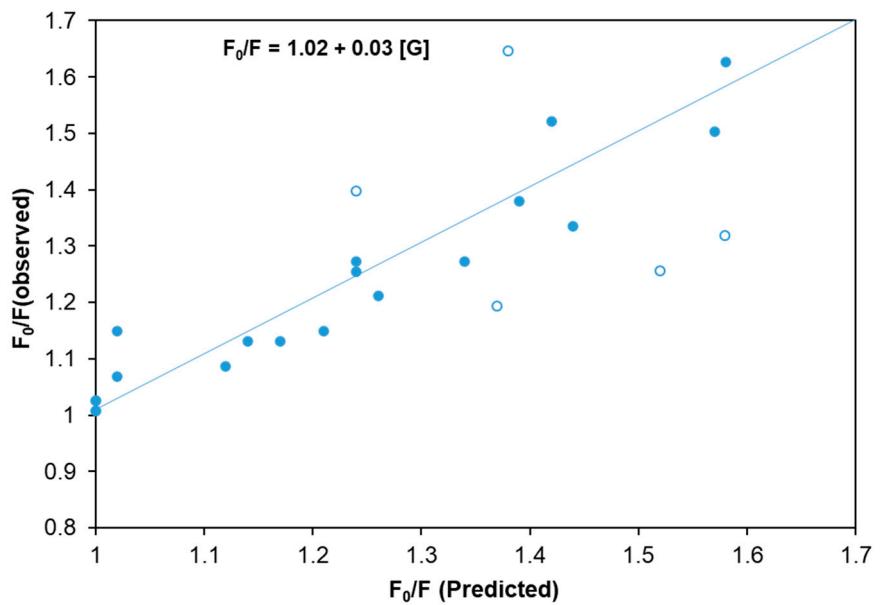
Figure S1. Representative photographs of a G 0.5% dispersion in TA 2.0 g L<sup>-1</sup> at pH 4.1 (a) and pH 7.1 (b) after one week.



**Figure S2.** Comparison of the effect of time sonication (5 and 15 min) for G 0.5% w/w dispersions in tannic acid 2.0 g L⁻¹ for the two series studied in this work ( $\lambda_{\text{ex}}/\lambda_{\text{em}} = 455/520$  nm; pH=4.1).



**Figure S3.** Multiple linear regression for  $F_0/F$  obtained with all concentrations of G and TA in solutions with variable TA concentration. [Riboflavin]=0.6 mg L⁻¹,  $\lambda_{\text{ex}}/\lambda_{\text{em}} = 455/520$  nm, pH=7.1.



**Figure S4.** Multiple linear regression for F<sub>0</sub>/F obtained with all G concentrations and TA 2.0 g L<sup>-1</sup> and 0.5 g L<sup>-1</sup> for a constant TA concentration 0.5 mg L<sup>-1</sup> and 2.0 mg L<sup>-1</sup>. [Riboflavin]=0.6 mg L<sup>-1</sup> 455/520 nm, pH=7.1.