

Electronic Supplementary Information (ESI)

Insight on the development and behaviour of $(\text{TiO}_2)_{0.9} + ((\text{ZnO}/\text{ZnS}):x\% \text{rGO})_{0.1}$ composite as photoelectrodes in DSSC

Thiago Kurz Pedra^{a*}, Ramon Dadalto Carvalho^b, Cristian Dias Fernandes^a, Eduardo Ceretta Moreira^c, Carolina Ferreira de Matos Jauris^d, Elson Longo^b, Mateus Meneghetti Ferrer^e, Cristiane Wienke Raubach^c, Sérgio da Silva Cava^{a,e}, Pedro Lovato Gomes Jardim^a, Mário Lúcio Moreira^a

^a Instituto de Física e Matemática, Federal University of Pelotas, Capão do Leão, RS, Brazil.

^b Centro de Desenvolvimento de Materiais Funcionais, Federal University of São Carlos, São Carlos, SP, Brazil.

^c Programa de Pós-Graduação em Ciência e Engenharia de Materiais, Federal University of Pampa, Bagé, RS, Brazil.

^d Department of Chemistry, Federal University of Santa Maria, Santa Maria, RS, Brazil.

^e Centro de Desenvolvimento Tecnológico, Federal University of Pelotas, Pelotas, RS, Brazil.

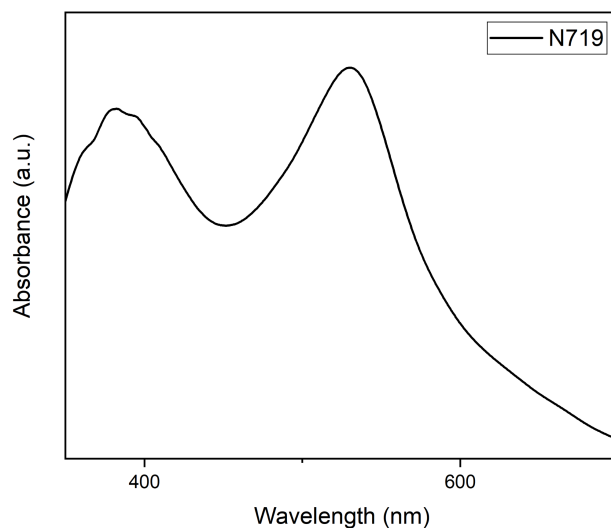


Figure S1: Absorbance spectrum of dye N719.

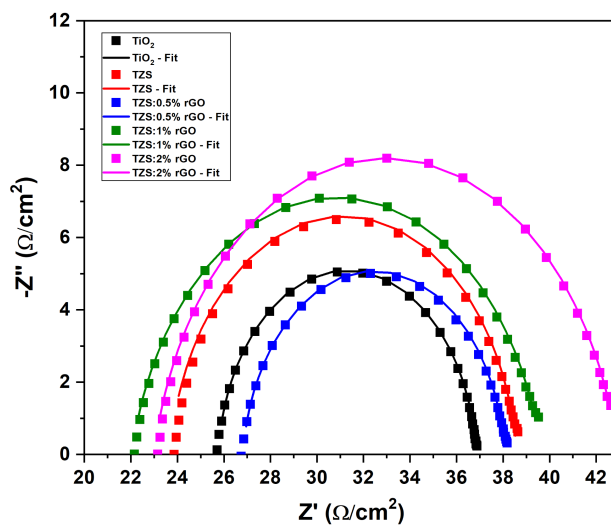


Figure S2: EIS spectra performed in dark of TiO_2 , TZS and TZS:x% rGO samples.

Samples	R_s (Ω/cm^2)	R_{rec} (Ω/cm^2)	CPE2 ($\mu\text{F}/\text{cm}^2$)
TiO_2	25.75	11.10	5.62
TZS	23.67	14.94	5.09
TZS:0,5%rGO	26.81	11.27	4.92
TZS:1%rGO	22.03	17.62	10.03
TZS:2%rGO	22.98	19.96	8.66

Table S1: EIS parameters performed in dark for TiO_2 , TZS and TZS:x% rGO samples.