

Evaluation of Dithiocarbamate-Modified Silica for Cisplatin Removal from Water

Rachel Lombana Fraguera ¹, José Alejandro Ricardo García ², Margarita Edelia Villanueva Tagle ², Mario Simeón Pomares Alfonso ¹, María Cracchiolo ³, Andela Kovačević ³, Marilena Tolazzi ³, Andrea Melchior ^{3,*} and Martina Sanadar ^{3,*}

¹ Institute of Materials Science and Technology (IMRE), University of Havana,
Calle Zapata s/n e/Mazon y G, Havana CP 10400, Cuba

² Faculty of Chemistry, University of Havana, Havana CP 10400, Cuba

³ Dipartimento Politecnico di Ingegneria e Architettura, Università di Udine,
via del Cotonificio 108, 33100 Udine, Italy

* Correspondence: andrea.melchior@uniud.it (A.M.); martina.sanadar@uniud.it (M.S.)

Supplementary Material

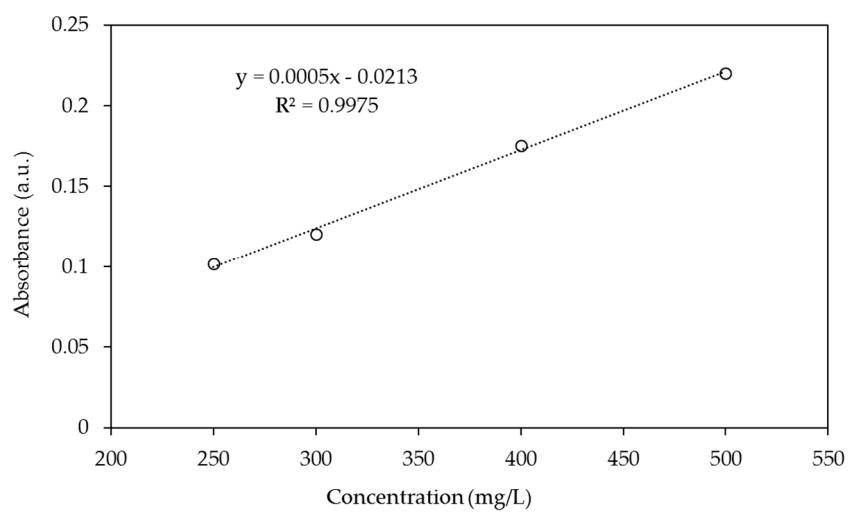


Figure S1. Calibration curve for the determination of cisplatin concentration in water (NaCl 0.9% w/v). Absorbance was measured at $\lambda = 300$ nm.

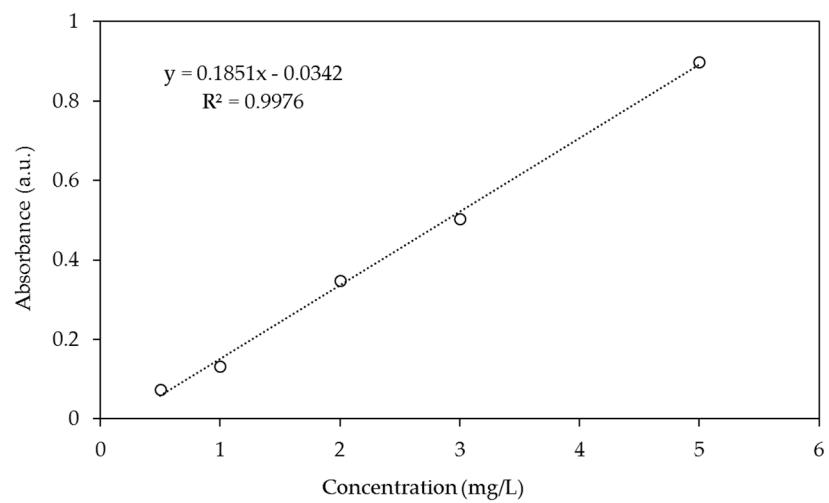


Figure S2. Calibration curve for the $\text{Pt}(\text{DDTC})_2$ complex determined in dichloromethane. Absorbance was measured at $\lambda = 347$ nm.

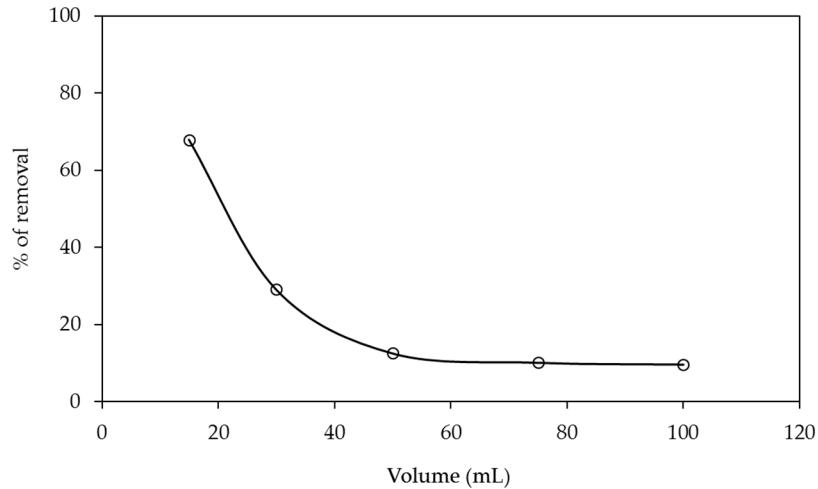


Figure S3. Effect of initial volume. Initial cisplatin concentration 5 mg mL⁻¹.

Table S1. Isotherms employed in this study. C_{eq} (mg L⁻¹) is the equilibrium cisplatin concentration in solution; q_e is the mass (mg) of adsorbed cisplatin per gram of adsorbent material.

Langmuir	$q_e = \frac{bK_L C_e}{1 + K_L C_e}$	C _e : liquid phase concentration of platinum (mg L ⁻¹) q _e : solid phase concentration of platinum (mg g ⁻¹) K _L : Langmuir constant (L/g) b: maximum loading (mg/g)
Freundlich	$q_e = K_F C_e^{1/n}$	K _F : Freundlich constant n: empirical factor