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DOCTOR EN CIENCIAS CON MENCIÓN EN QUÍMICA, Universidad Estadual de Campinas,

Brasil - 1986

LÍNEA(S) DE INVESTIGACIÓN O ÁREAS DE TRABAJO

- ✓ PROCESOS DE OXIDACIÓN AVANZADA Y QUÍMICA DE LA MADERA

NÚMERO DE TESIS DE MAGÍSTER DIRIGIDAS EN LOS ÚLTIMOS 10 AÑOS (FINALIZADAS)

- ✓ Jessica Nieto J., Graduado 06-09-07 Magister en Ciencias con Mención en Química
"Aplicación de la Fotocatálisis Solar en la Degradación de Antibióticos"

NÚMERO DE TESIS DE DOCTORADO DIRIGIDAS EN LOS ÚLTIMOS 10 AÑOS (FINALIZADAS)

- ✓ Cristian Miranda G., 24-04-2014 Doctorado en ciencias con mención en Química

"Remoción de metales y oxidación simultánea de materia orgánica en la degradación de compuestos organometálicos contaminantes por métodos redox avanzados"

NÚMERO DE TESIS DIRIGIDAS O ACTIVIDAD FORMATIVA EQUIVALENTE GUIADAS EN EL

PROGRAMA, EN LOS ÚLTIMOS 10 AÑOS (FINALIZADAS)

- ✓ Adriana Mera B., 03-05-2012 Dr. Héctor Mansilla Prof Guía

"Síntesis, Caracterización y Actividad Fotocatalítica de BiOX(X=F, Cl, Br yI) Nanoestructurados para el Tratamiento de Riles de la Industria Vitivinícola"

LISTADO DE PUBLICACIONES EN LOS ÚLTIMOS 10 AÑOS.

A Mera, Y Moreno, O. Peña, J-Y Pian, "Solvothermal synthesis of BiOI microspheres. Effect of the reaction time on the morphology and photocatalytic activity", **accepted in J. Photochem. photobiol. A: Chem, 2014**

Suna Yuksel, Bernabé L. Rivas, Julio Sánchez, Héctor D. Mansilla, Jorge Yañez, Pia Kochifas, Nalan Kabay, Marek Bryjak, "Water-soluble polymer and photocatalysis for arsenic removal", **accepted in J. Appl. Pol. Sci. 2014**

E. Yamal-Turbay, E. Ortega, L.O. Conte, M. Graells, H.D. Mansilla, O.M. Alfano, M. Pérez-Moya. "Photonic Efficiency of the Photodegradation of Paracetamol in Water by the Photo-Fenton Process", **accepted in Env. Sci. Poll. Res. 2014**

P. Sathishkumar, R. V. Mangalaraja, O. Rozas, H.D. Mansilla, M. Gracia-Pinilla, S. Anandan. "Low frequency ultrasound (42 kHz) assisted Acid Blue 113 degradation in the presence of visible light driven RE^{3+} nanoclusters loaded TiO_2 nanophotocatalysts", **Ultrasonic Photochemistry, 21 (2014) 1675-1681**

M. Velásquez, I.P. Santander, D.R. Contreras, J. Yáñez, C. Zaror, R.A. Salazar, M. Pérez-Moya, H.D. Mansilla, "Oxidative degradation of Sulfathiazole by Fenton and photo-Fenton reactions", **J. Environ. Sci. Health-A, 49 (2014) 661-670**

Pablo Salgado, Victoria Melin, David Contreras, Yanko Moreno and Héctor D. Mansilla, "Fenton Reaction driven by iron ligands", **J. Chil. Chem. Soc. 58 (2013) 2096-2101**

Cristian Miranda, Jorge Yáñez, David Contreras, H.D. Mansilla, "Removal of phenylmercury by heterogeneous photo-catalysis assisted by UV-A", **J. Environ. Sci. Health-A, 48 (2013) 1642-1648**

J. Yáñez, M. Guajardo, C. Miranda, C. Soto, H.D. Mansilla, A.R. Flegal, "New assessment of organic mercury formation in highly polluted sediments in the Lenga estuary, Chile. Mar". **Pollut. Bull. 73 (3013) 16-23**

C. Miranda, H. Mansilla, J. Yáñez, S. Obregón, G. Colón, "Improved photocatalytic activity of $g-C_3N_4/TiO_2$ composites prepared by a simple impregnation method", **J. Photochem. Photobiol. A:Chem. 253 (2013) 16-21**

C. Oviedo, A. Berrocal, J. Navarrete, H.D. Mansilla, D. Contreras. "Zn-EDTA degradation by catechol driven Fenton Reaction". **Química Nova**, **35 (2012) 1772-1775**

Claudio Salazar, Claudio A. Zaror, María Angélica Mondaca, Patricia González, Héctor Mansilla, Carlos Peña." *Advanced Electrochemical Oxidation of ultrafiltration Permeates from Cellulose Bleaching Effluents*". **J. Adv. Oxid. Technol.** **15 (2012) 255-265**

Jorge Yáñez, María Paz Farías, Valeria Zúñiga, César Soto, David Contreras, Eduardo Pereira, Héctor D. Mansilla, Rosario Castillo, Pedro Sáez, "Differentiation of two main ammunition brands in Chile by Regularized Discriminant Analysis (RDA) of metals in gunshot residues", **Microchem. J.**, **101 (2012) 43-48**

M. Pérez-Moya, M. Graells, and H.D. Mansilla, "A Practical Parametrical Characterization of the Fenton and the Photo-Fenton Sulfamethazine Treatment using Semi-Empirical Modeling", **J. Chem. Technol. Biotechnol.** **86 (2011) 826-832**

D. Contreras, J. Rodríguez, L. Basaez, J. Freer, R. Valenzuela, H. Mansilla, P. Vanysek. "New insights in the dihydroxybenzenes-Driven Fenton Reaction: Electrochemical study of interaction between dihydroxybenzenes and Fe(III)" **Wat. Sci. Technol.** **64 (2011) 2103-2108**

Jorge Yáñez, Andrea Campos, Alan Mercado, César Soto, Héctor D. Mansilla, José Neira. "Liquid carbon dioxide for improvements in online preconcentration and sample introduction in AAS". **J. Anal. Atom. Spectrom.** **26 (2011) 320-324**

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C. Zaror, C. Segura, H.D. Mansilla, M.A. Mondaca, P. Gonzalez, "*Kinetic study of imidacloprid removal by advanced oxidation based on photo-Fenton process*", **Environ. Technol.**, **31** (2010) **1411-1416**

A.L. Giraldo, G.A. Peñuela, R.A. Torres-Palma, N.J. Pino, R.A. Palominos, H.D. Mansilla, "*Degradation of the antibiotic oxolinic acid by photocatalysis with TiO₂ in suspension*", **Wat. Res.**, **44** (2010) **5158-5167**

M. Pérez-Moya, M. Graells, G. Castells, J. Amigó, E. Ortega, G. Buhigas, L.M. Pérez, H.D. Mansilla, "*Characterization of the Degradation Performance of the Sulfamethazine Antibiotic by Photo-Fenton Process*", **Wat. Res.**, **44** (2010) **2533-2540**

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R. Palominos, A. Mora, M.A. Mondaca, M. Pérez-Moya, H.D. Mansilla, "Oxolinic acid photo-oxidation using immobilised TiO_2 ", **J. Hazard. Mater.** **158**, 460-464 (2008)

J. Nieto, J. Freer, D. Contreras, R.J. Candal, E.E. Sileo, H.D. Mansilla. "Photocatalysed degradation of flumequine by doped TiO_2 and simulated solar light", **J. Hazard. Mater.** **155**, 45-50 (2008)

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M. Pérez-Moya, M. Graells Sobré, L.J. del Valle, E. Centelles, H.D. Mansilla. "Fenton and photo-Fenton degradation of 2-chlorophenol: multivariate analysis and toxicity monitoring", **Catal. Today**, **124**, 163-171 (2007)

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C. Reyes, J. Fernández, J. Freer, M.A. Mondaca, C. Zaror, S. Malato, H.D. Mansilla. *"Degradation and inactivation of tetracycline by TiO₂ photocatalysis"*. **J. Photochem. Photobiol. A: Chem.** **184**, 141-146 (2006)

H. Gómez, F. Orellana, H. Lizama, H.D. Mansilla, E.A. Dalchiele. *"Study of phenol photodegradation with TiO₂-WO₃ coupled semiconductors activated by visible light"*. **J. Chilean Chem. Soc.** **51**, 1006-1009 (2006)

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F. Lara, L. Cornejo, L. Figueroa, J. Yáñez, J. Freer, H.D. Mansilla, *"Solar-light assisted removal of arsenic from natural waters: effect of iron and citrate concentrations"*. **J. Chem. Technol. Biotechnol.**, **81**, 1282-1287 (2006)

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J. Flores, V. Jiménez, J. Belmar, H.D. Mansilla, J. Alderete. *"The inclusión complexes between phenol derivatives and β -cyclodextrin based polymer"*, **J. Incl. Phenom. Macro.** **53**, 63-68 (2005)

M. Suwalsky, C. Schneider, H.D. Mansilla, J. Kiwi, "Evidence of the hydration effect at the semiconductor-bilayer interface during the degradation of bacterial wall membranes by TiO₂ photocatalysis", **J. Photochem. Photobiol. B; Biol.** **78**, 253-258 (2005)

P. Raja, A. Bozzi, H.D. Mansilla, J. Kiwi, "Evidence for Superoxide-radical Anion, Singlet Oxygen and OH-radical Intervention During the Degradation of the Lignin Model Compound (3-Methoxy-4-Hydroxyphenylmethylcarbinol)", **J. Photochem. Photobiol. A: Chem.** **169**, 271-278 (2005)

G. Ghiselli, W.F. Jardim, M.I. Litter, H.D. Mansilla, "Destruction of EDTA using Fenton and photo-Fenton-like reactions under UV-A irradiation", **J. Photochem. Photobiol. A: Chem.**, **167**, 59-67 (2004).

G. Vidal, J. Nieto, H.D. Mansilla, C. Bornhardt, "Combined oxidative and biological treatment of separated streams of tannery wastewater", **Wat Sci Technol.**, **49**, 287-292 (2004)

J. Fernández, J. Kiwi, J. Freer, C. Lizama, H.D. Mansilla, "Orange II photocatalysis on immobilized TiO₂. Effect of the pH and H₂O₂", **Appl. Catal. B: Environ.**, **48**, 205-211 (2004)

LISTADO DE PROYECTOS DE INVESTIGACIÓN EN LOS ÚLTIMOS 10 AÑOS

✓ FONDECYT 1130502N (2013-2015)

"Synthesis, characterization and photo-catalytic activity of BiOX on winery effluents"
Investigador Responsable

✓ Project Conicyt/FONDAP/15110019, 2013-2017

Solar Energy Research Center (SERC-Chile), ,

Investigador Asociado

✓ Proyecto Anillo PIA ACT-130 (CONICYT), 2011-2013

“Polymer Materials for Environmental and Forensic Applications”

Investigador Titular

✓ FONDECYT (1130502)

“Synthesis, Characterization and Photocatalytic Activity of Nanostructured BiOX (X=F, Cl, Br, I) for the Treatment of Wine Wastewaters”

Investigador Responsable

✓ FONDECYT (1110641), 2011-2012

“Oxidation of Organic matter and simultaneous reduction of metal in organometallic compounds by advanced redox processes”

Investigador responsable.

✓ FONDECYT (1110606), 2011-2013

“Assessment of conventional drinking water treatment for removing traces of organic contaminants from products of extensive use”

Co-investigador

✓ FONDECYT (1100738), 2010-2013

“Water and chemicals recovery from segregated kraft cellulose bleaching effluents using membrane separation and advanced electrooxidation processes”

Co-Investigador

✓ FONDECYT (1080230), 2008-2010

Photo-catalyzed oxidation of antibiotics: mechanism and biological testing

Investigador Responsable.

✓ FONDECYT (1070478), 2007-2009

“Amplificación y regulación de la reacción de Fenton durante la bio-degradación de madera por hongos de pudrición parda”

Co-investigador

✓ FONDECYT (1060892), 2006-2009

“Modelación y optimización de un sistema de tratamiento de efluentes en base a un proceso foto-Fenton heterogéneo, en serie con tratamiento biológico aeróbico, para depurar pesticidas residuales”

Co-Investigador

✓ *Activación Oxidativa de Fibras de Madera por un Sistema de Fenton Biomimético, (1040619), 2004-2006, Co-Investigador*

✓ FONDECYT (1040460), 2004-2007

“Degradación oxidativa de Antibióticos Mediante Fotocatálisis Solar”

Investigador Responsable

✓ FONDECYT (1010881), 2001-2004

“Uso Combinado de Ozono y Carbón Activado para Incrementar la Biodegradabilidad de Efluentes Complejos Derivados de Blanqueo de Celulosa Kraft”

Co-Investigador

✓ FONDECYT (1010854), 2001-2003

“Oxidación Fotocatalizada de Colorantes Reactivos: Optimización Mediante Analisis Multivariado”

Investigador Responsable