

Luis Alberto Estudillo-Wong

Researcher

Centro Interdisciplinario de Investigaciones y Estudios sobre Medio Ambiente y Desarrollo (CIIEMAD)

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Qualifications

PhD, Síntesis y caracterización de nanomateriales basados en Pt y Pd para la electro-reducción de NO en medio alcalino, IPN-ESIQIE-DIMM

1 Jan 2011 → 31 Jan 2014

Award Date: 16 Jan 2014

Master, Síntesis y Caracterización de Nanopartículas (bi)-metálicas Aplicadas a la Electro-reducción de Especies Nitradas, Escuela Superior de Ingeniería Química e Industrias Extractivas (ESIQIE)

1 Jan 2009 → 31 Jan 2011

Award Date: 31 Jan 2011

Bachelor, Efecto Electro-catalítico de Nanopartículas de Platino versus la Reducción de Iones Nitrato y Nitrito, Escuela Superior de Ingeniería Química e Industrias Extractivas (ESIQIE)

1 Jan 2003 → 1 Jan 2008

Award Date: 14 Nov 2008

Employment

Professor

Researcher

Centro Interdisciplinario de Investigaciones y Estudios sobre Medio Ambiente y Desarrollo (CIIEMAD)

Mexico

1 Jul 2018 → present

Postdoctoral

Université de Poitiers

France

1 May 2014 → 31 Aug 2016

Research outputs

Hydrothermal stability of gamma-Al₂O₃ supports varied with crystal plane orientation of pseudo-boehmite precursor

Mo, Y., Li, C., Li, H., Estudillo-Wong, L. A., Wu, L., Wang, Y., Yu, H., Li, D. & Feng, Y., Jan 2024, In: Chemical Engineering Science.

Revisiting the Underlying Chemistry Enhancing the Activity of Photoelectro- and Photo-Catalysts Concerning H₂ Production

Sosa-Rodríguez, F. S., Estudillo-Wong, L. A., Palma-Goyes, R. E. & Vazquez-Arenas, J., 2024, *Trends and Innovations in Energetic Sources, Functional Compounds and Biotechnology*.

Revisiting Current Trends in Electrode Assembly and Characterization Methodologies for Biofilm Applications

Estudillo-Wong, L. A., Guerrero-Barajas, C., Vázquez-Arenas, J. & Alonso-Vante, N., 18 Jan 2023, In: Surfaces.

Nitrogen-Doped Carbon-Encapsulated FeCo Alloy Nanostructures with Surface-Dangling Fe(Co)-N_x Active Sites for Oxygen Reduction in Alkaline and Acid Media

Song, X. W., Zhong, H., Xu, K., Estudillo-Wong, L. A., Pei, M., Cao, M., Xu, H., Alonso-Vante, N., Feng, Y. & Li, D., 23 Dec 2022, In: ACS Applied Nano Materials. 5, 12, p. 18035-18047 13 p.

Ni₅P₄-NiP₂-Ni₂P Nanocomposites Tangled with N-Doped Carbon for Enhanced Electrochemical Hydrogen Evolution in Acidic and Alkaline Solutions

Pei, M., Song, X., Zhong, H., Estudillo-Wong, L. A., Gao, Y., Jin, T., Huang, J., Wang, Y., Yang, J. & Feng, Y., Dec 2022, In: *Catalysts*. 12, 12, 1650.

Factors intervening in oxide and oxide-composite supports on nanocatalysts in the energy conversion

Estudillo-Wong, L. A. & Alonso-Vante, N., 11 Nov 2022, *Energy Applications*. wiley, Vol. 1-2. p. 1-60 60 p.

Bifunctional oxygen electrode cobalt-nickel sulfides catalysts originated from intercalated LDH precursors

Gong, X., Zhong, H., Estudillo-Wong, L. A., Alonso-Vante, N., Feng, Y. & Li, D., Nov 2022, In: *Journal of Energy Chemistry*. 74, p. 376-386 11 p.

Synthesis and characterization of Fe₂O₃-TiO₂ magnetic materials: Effect of heat-treatment on catalytic activity of naphthalene hydrogenation

Cuahtémoc, I., Estudillo-Wong, L. A. & Jiménez-Vazquez, A., 1 Jun 2022, In: *Catalysis Today*. 392-393, p. 167-179 13 p.

Synthesis and electrocatalytic performance of N-doped graphene embedded with Co/CoO nanoparticles towards oxygen evolution and reduction reactions

Wang, J., Zhong, H., Estudillo-Wong, L. A., Li, H., Alonso-Vante, N., Li, D., Tang, P. & Feng, Y., Apr 2022, In: *Catalysis Communications*. 164, 106428.

Oxygen vacancies engineering by coordinating oxygen-buffering CeO₂ with CoO_x nanorods as efficient bifunctional oxygen electrode electrocatalyst

Zhong, H., Alberto Estudillo-Wong, L., Gao, Y., Feng, Y. & Alonso-Vante, N., Aug 2021, In: *Journal of Energy Chemistry*. 59, p. 615-625 11 p.

The effect on the electrocatalytic activity of the chemical interaction of selenium with palladium centers: Oxygen reduction and methanol oxidation reactions in alkaline medium

Vega-Granados, K., Canaff, C., Estudillo-Wong, L. A., Alonso-Núñez, G., Cruz-Reyes, J. & Alonso-Vante, N., Aug 2021, In: *Journal of Physics Condensed Matter*. 33, 31, 314001.

Naphthalene hydrogenation using Rh/Fe₂O₃-TiO₂ magnetic catalysts

Cuahtémoc-López, I., Jiménez-Vázquez, A., Estudillo-Wong, L. A., Torres-Torres, G., Pérez-Vidal, H., Barrera-Salgado, M., López-González, R. & De la Cruz-Romero, D., 15 Jan 2021, In: *Catalysis Today*. 360, p. 176-184 9 p.

FeCo nanoalloys embedded in nitrogen-doped carbon nanosheets/bamboo-like carbon nanotubes for the oxygen reduction reaction

Song, X. W., Zhang, S., Zhong, H., Gao, Y., Estudillo-Wong, L. A., Alonso-Vante, N., Shu, X. & Feng, Y., 7 Jan 2021, In: *Inorganic Chemistry Frontiers*. 8, 1, p. 109-121 13 p.

Chemistry, surface electrochemistry, and electrocatalysis of carbon-supported palladium-selenized nanoparticles

Mora-Hernandez, J. M., Vega-Granados, K., Estudillo-Wong, L. A., Canaff, C. & Alonso-Vante, N., 23 Nov 2020, In: *ACS Applied Energy Materials*. 3, 11, p. 11434-11444 11 p.

Cobalt-Based Multicomponent Oxygen Reduction Reaction Electrocatalysts Generated by Melamine Thermal Pyrolysis with High Performance in an Alkaline Hydrogen/Oxygen Microfuel Cell

Zhong, H., Estudillo-Wong, L. A., Gao, Y., Feng, Y. & Alonso-Vante, N., 13 May 2020, In: *ACS Applied Materials and Interfaces*. 12, 19, p. 21605-21615 11 p.

Boosting the mineralization of reactive black 5 dye with Y- or H₂-doped anatase phase: Equivalent induced photocatalytic effect

Estudillo-Wong, L. A. & Alonso-Vante, N., 1 Nov 2019, In: *Journal of Electroanalytical Chemistry*. 852, 113521.

Platinum nanoparticles photo-deposited on SnO₂-C composites: An active and durable electrocatalyst for the oxygen reduction reaction

Hussain, S., Kongi, N., Erikson, H., Rähn, M., Merisalu, M., Matisen, L., Paiste, P., Aruväli, J., Sammelselg, V., Estudillo-Wong, L. A., Tammeveski, K. & Alonso-Vante, N., 1 Sep 2019, In: *Electrochimica Acta*. 316, p. 162-172 11 p.

Molybdenum doping augments platinum-Copper Oxygen reduction Electrocatalyst

Luo, Y., Kirchhoff, B., Fantauzzi, D., Calvillo, L., Estudillo-Wong, L. A., Granozzi, G., Jacob, T. & Alonso-Vante, N., Jan 2018, In: *ChemSusChem*. 11, 1, p. 193-201 9 p.

Support Interaction Effect of Platinum Nanoparticles on Non-, Y-, Ce-Doped Anatase and Its Implication on the ORR in Acid and Alkaline Media

Estudillo-Wong, L. A., Ramos-Sanchez, G., Calvillo, L., Granozzi, G. & Alonso-Vante, N., Dec 2017, In: *ChemElectroChem*. 4, 12, p. 3264-3275 12 p.

Synergistic effect of Yttrium and pyridine-functionalized carbon nanotube on platinum nanoparticles toward the oxygen reduction reaction in acid medium

Luo, Y., Shroti, N., Daletou, M. K., Estudillo-Wong, L. A. & Alonso-Vante, N., 1 Dec 2016, In: *Journal of Catalysis*. 344, p. 712-721 10 p.

Carbon supported Pt-Y₂O₃ and Pt-Gd₂O₃ nanoparticles prepared via carbonyl chemical route towards oxygen reduction reaction: Kinetics and stability

Luo, Y., Estudillo-Wong, L. A. & Alonso-Vante, N., 16 Nov 2016, In: *International Journal of Hydrogen Energy*. 41, 43, p. 19601-19609 9 p.

Enhanced oxygen reduction reaction stability on platinum nanoparticles photo-deposited onto oxide-carbon composites

Estudillo-Wong, L. A., Luo, Y., Díaz-Real, J. A. & Alonso-Vante, N., 15 Jun 2016, In: *Applied Catalysis B: Environmental*. 187, p. 291-300 10 p.

An easy and cheap chemical route using a MOF precursor to prepare Pd-Cu electrocatalyst for efficient energy conversion cathodes

Luo, Y., Estudillo-Wong, L. A., Cavillo, L., Granozzi, G. & Alonso-Vante, N., Jun 2016, In: *Journal of Catalysis*. 338, p. 135-142 8 p.

Nanostructured palladium tailored via carbonyl chemical route towards oxygen reduction reaction

Luo, Y., Mora-Hernández, J. M., Estudillo-Wong, L. A., Arce-Estrada, E. M. & Alonso-Vante, N., 1 Jun 2015, In: *Electrochimica Acta*. 173, p. 771-778 8 p., 25073.

The effect of carbon-based substrates onto non-precious and precious electrocatalytic centers

Sreekuttan, M. U., Campos-Roldan, C. A., Mora-Hernandez, J. M., Luo, Y., Estudillo-Wong, L. A. & Alonso-Vante, N., 2015, *Polymer Electrolyte Fuel Cells 15, PEFC 15*. Gasteiger, H. A., Weber, A. Z., Ramani, V. K., Fuller, T. F., Mantz, R. A., Uchida, H., Buchi, F. N., Edmundson, M., Coutanceau, C., Fenton, J. M., Mitsushima, S., Schmidt, T. J., Shinohara, K., Swider-Lyons, K., Jones, D. J., Pivovar, B. S., Ayers, K. E., Perry, K. A., Narayanan, S. R. & Strasser, P. (eds.). 17 ed. Electrochemical Society Inc., p. 35-42 8 p. (ECS Transactions; vol. 69, no. 17).

Interaction of NO during cathodic polarization in alkaline conditions at the interface of Pt-nanostructures supported on C and TiO₂-C

Estudillo-Wong, L. A., Arce-Estrada, E. M. & Manzo-Robledo, A., 10 Jul 2014, In: *Electrochimica Acta*. 134, p. 100-106 7 p.

Electroreduction of N O_x^Z species in alkaline medium on Pt nanoparticles

Estudillo-Wong, L. A., Santillán-Díaz, G., Arce-Estrada, E. M., Alonso-Vante, N. & Manzo-Robledo, A., 15 Jan 2013, In: *Electrochimica Acta*. 88, p. 358-364 7 p.

TiO₂/C composite as a support for Pd-nanoparticles toward the electrocatalytic oxidation of methanol in alkaline media

Estudillo-Wong, L. A., Vargas-Gómez, A. M., Arce-Estrada, E. M. & Manzo-Robledo, A., 2013, In: *Electrochimica Acta*. 112, p. 164-170 7 p.

Electro-reduction of nitrate species on Pt-based nanoparticles: Surface area effects: Surface area effects

Estudillo-Wong, L. A., Arce-Estrada, E. M., Alonso-Vante, N. & Manzo-Robledo, A., 30 May 2011, In: *Catalysis Today*. 166, 1, p. 201-204 4 p.

Electro-reduction of nitrate and nitrite ions on carbon-supported Pt nanoparticles

Estudillo-Wong, L. A., Alonso-Vante, N. & Manzo-Robledo, A., 2008, *ECS Transactions - MES 23: Electrochemistry, Nanotechnology, and Biomaterials - 23rd MES Meeting*. 1 ed. Electrochemical Society Inc., p. 385-393 9 p. (ECS Transactions; vol. 15, no. 1).

Projects

Design and construction of a photo-electrodegradation system for its application in emerging contaminants

Estudillo-Wong, L. A., Guerrero Barajas, C., Vázquez Arenas, J. G., ALCÁNTARA CÁRDENAS, J. A. & Martínez Acuña, M. I.

1/01/23 → 31/12/23

Design of oxide-carbon composite materials applied for emerging pollutants in water

Estudillo-Wong, L. A., Perez Rodríguez, S., Vázquez Arenas, J. G. & Martínez Acuña, M. I.

1/01/21 → 31/12/22

Electrocoagulation: Electrochemical techniques applied to the remotion of As and F ions in tap water

Estudillo-Wong, L. A., Martínez Acuña, M. I., Retana Contreras, M. D. C. & Manzo Robledo, A.

1/01/19 → 31/12/19

Material Design Applied in Remediation of Drinking Water with Electrochemical Technologies

Estudillo-Wong, L. A., Retana Contreras, M. D. C., Vazquez-Arenas, J. & Perez Rodríguez, S.

1/01/20 → 31/12/20

Courses

Electrochemistry - ESIQIE

Luis Alberto Estudillo-Wong

3/08/10 → 5/07/21

Electrochemistry: Fundamentals and Case Studies - UJAT

Luis Alberto Estudillo-Wong

23/08/21 → 27/08/21

Electrochemistry II - UPIBI-IPN

Luis Alberto Estudillo-Wong

21/02/23 → 30/06/23

Electrochemistry I - UPIBI-IPN

Luis Alberto Estudillo-Wong

21/02/23 → 30/06/23

Seminar I - DCEAS_CIIEMAD

Luis Alberto Estudillo-Wong

1/08/20 → 24/12/21

Seminar II - DCEAS_CIIEMAD

Luis Alberto Estudillo-Wong
9/08/22 → 22/12/23

Seminar III - DCEAS_CIIEMAD

Luis Alberto Estudillo-Wong
7/02/23 → 6/07/23

Seminario II - MCEAS_CIIEMAD

Luis Alberto Estudillo-Wong
1/01/20 → 30/06/20

Structural Characterization - ITT

Luis Alberto Estudillo-Wong
1/01/21 → 31/07/21

Thermodynamic of Chemical Reaction Equilibrium - ESIQIE

Luis Alberto Estudillo-Wong
1/02/22 → 14/07/23

Topic Selects: Energy Technology at Nanoscale - ITT

Luis Alberto Estudillo-Wong
1/01/19 → 31/05/19

Topic Selects I - ITT

Luis Alberto Estudillo-Wong
1/08/18 → 25/12/18

Topic Selects in Environmental and Sustainability Sciences - DCEAS_CIIEMAD

Luis Alberto Estudillo-Wong
2/02/22 → 22/06/22