

Curriculum Vitae – Dr. Antonio José Martín Fernández

18.12.2024

Birthdate 25 May 1977
Birthplace Sevilla, Spain
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Education

2005 – 2009 Ph.D. Chemistry (cum laude), Universidad Autónoma de Madrid, Spain. Electrodeposited Pt and Pt-Co Based Electrodes for PEMFC. Advisors: Dr. A. Martínez-Chaparro and Prof. P. Herrasti.
1996 – 2002 M.Sc. Mechanical Engineering with highest distinction, University of Sevilla, Spain

Languages

Spanish: native English: full proficiency German: conversational

Summary of Career

2014 – to date Scientist in the group of Prof. Pérez-Ramírez, ETH Zurich
2013 – 2014 Associate Researcher, Institute of Catalysis and Petrochemistry, ICP-CSIC, Madrid, Spain
2010 – 2013 Postdoctoral Researcher, CIEMAT, Madrid, Spain
2009 – 2010 Scientific Coordinator, Olea S.L., Madrid, Spain
2004 – 2005 Project Manager, EcoinTEGRAL S.A., Córdoba, Spain
2003 – 2004 Project Manager Junior, Abengoa S.A., Sevilla, Spain

Current Areas of Responsibility

Management of research academic and industrial projects

Daily supervision and coordination of projects in the areas of chemical recycling of plastics, electrocatalytic reduction of CO₂, and higher alcohols synthesis. Currently supervising activities of 1 graduate student (20 over career), 2 doctoral students (5), and 3 postdoctoral researchers (4). Successful completion of 15 academic projects and 7 industrial ones. The full list is available in the annex

Methods and infrastructure development for catalysis research

Development of the National Electrocatalysis Laboratory, as part of NCCR Catalysis, Phase II. Engineering tools for catalytic recycling of plastic waste

Teaching

2022 – to date Heterogeneous Reaction Engineering, BSc Chemical Engineering
2016 – to date Catalysis Engineering, MSc Chemical and Bioengineering

Safety and equipment responsibility

2021 – to date Safety officer and infrastructure responsible

Publications Summary

Hirsch index: 29 (Scopus), 30 (Google Scholar) | 75 publications in peer-reviewed scientific journals (full list through provided links) | >5000 citations (>4500 in the last 5 years) | Inventor of 3 patents/patent applications, 2 of which are exploited industrially | 1 book chapter | 1 guest-edited journal issue

Selected Publications by Area

Chemical recycling of plastics

Jaydev, S.D., Martín, A.J., García, D., Chikri, K., and Pérez-Ramírez, J. (2024). Assessment of transport phenomena in catalyst effectiveness for chemical polyolefin recycling. *Nat. Chem. Eng.* 1, 565-575 (corresponding author)

Jaydev, S.D., Martín, A.J., Usteri, M.-E., Chikri, K., Eliasson, H., Erni, R., and Pérez-Ramírez, J. (2024). Consumer grade polyethylene recycling via hydrogenolysis on ultrafine supported ruthenium nanoparticles. *Angew. Chem. Int. Ed.* 63, e202317526

Martín, A.J., Mondelli, C., Jaydev, S.D., and Pérez-Ramírez, J. (2021). Catalytic processing of plastic waste on the rise. *Chem* 7, 1487-1533

Electrocatalytic reduction of CO₂

Preikschas, P., Zhang, J., Seemakurthi, R.R., Lian, Z., Martín, A.J., Xi, S., Krumeich, F., Ma, H., Zhou, Y., López, N., et al. (2024). CO₂ electroreduction to long-chain hydrocarbons on cobalt catalysts. *Adv. Energy Mater.* 2401447

Ampelli, C., Giusi, D., Miceli, M., Merdzhanova, T., Smirnov, V., Chime, U., Astakhov, O., Martín, A.J., Veenstra, F.L.P., Pineda, F.A.G., et al. (2023). An artificial leaf device built with earth-abundant materials for combined H₂ production and storage as formate with efficiency > 10%. *Energy Environ. Sci.* 16, 1644–1661

Zhou, Y., Martín, A.J., Dattila, F., Xi, S., López, N., Pérez-Ramírez, J., and Yeo, B.S. (2022). Long-chain hydrocarbons by CO₂ electroreduction using polarized nickel catalysts. *Nat. Catal.* 5, 545–554

Larrazábal, G.O., Shinagawa, T., Martín, A.J., and Pérez-Ramírez, J. (2018). Microfabricated electrodes unravel the role of interfaces in multicomponent copper-based CO₂ reduction catalysts. *Nat. Commun.* 9, 1477

CO₂ hydrogenation to alcohols

Suvarna, M., Zou, T., Chong, S.H., Ge, Y., Martín, A.J., and Pérez-Ramírez, J. (2024). Active learning streamlines development of high performance catalysts for higher alcohol synthesis. *Nat. Commun.* 15, 5844

Ge, Y., Zou, T., Martín, A.J., Block, T., Pöttgen, R., and Pérez-Ramírez, J. (2024). Defective zirconia promotes monometallic iron catalysts for higher alcohol synthesis. *Chem Catal.* 4, 101010

Martin, O., Martín, A.J., Mondelli, C., Mitchell, S., Segawa, T.F., Hauert, R., Drouilly, C., Curulla-Ferré, D., and Pérez-Ramírez, J. (2016). Indium oxide as a superior catalyst for methanol synthesis by CO₂ hydrogenation. *Angew. Chem. Int. Ed.* 55

Hydrogen fuel cells

Fernández-Moreno, J., Guelbenzu, G., Martín, A.J., Folgado, M.A., Ferreira-Aparicio, P., and Chaparro, A.M. (2013). A portable system powered with hydrogen and one single air-breathing PEM fuel cell. *Appl. Energy*. 109, 60-66

Martín, A.J., Chaparro, A.M., and Daza, L. (2011). Single cell study of electrodeposited cathodic electrodes based on Pt-WO₃ for polymer electrolyte fuel cells. *J. Power Sources* 196, 4187–4192

Chaparro, A.M., Martín, A.J., Folgado, M.A., Gallardo, B., and Daza, L. (2009). Comparative analysis of the electroactive area of Pt/C PEMFC electrodes in liquid and solid polymer contact by underpotential hydrogen adsorption/desorption. *Int. J. Hydrog. Energy* 34, 4838-4846

Sustainability analysis

Mitchell, S., Martín, A.J., Guillén-Gosálbez, G., and Pérez-Ramírez, J. (2024). The future of chemical sciences is sustainable. *Angew. Chem. Int. Ed.* e202318676

Mitchell, S., Martín, A.J., and Pérez-Ramírez, J. (2024). Transcending scales in catalysis for sustainable development. *Nat. Chem. Eng.* 1, 13–15

Nabera, A., Istrate, I.-R., Martín, A.J., Pérez-Ramírez, J., and Guillén-Gosálbez, G. (2023). Energy crisis in Europe enhances the sustainability of green chemicals. *Green Chem.* 25, 6603–6611

Prospective technologies

D'Angelo, S.C., Martín, A.J., Cobo, S., Ordóñez, D.F., Guillén-Gosálbez, G., and Pérez-Ramírez, J. (2023). Environmental and economic potential of decentralised electrocatalytic ammonia synthesis powered by solar energy. *Energy & Environ. Sci.* 16, 3314–3330

Martín, A.J., Shinagawa, T., and Pérez-Ramírez, J. (2020). Electrocatalytic reduction of nitrogen: from Haber-Bosch to ammonia artificial leaf. *Chem* 5, 263–283

Martín, A.J., and Pérez-Ramírez, J. (2019). Heading to distributed electrocatalytic conversion of small abundant molecules into fuels, chemicals, and fertilizers. *Joule* 3, 2602–2621

Miscellaneous

Martín, A.J., Mitchell, S., Mondelli, C., Jaydev, S., and Pérez-Ramírez, J. (2022). Unifying views on catalyst deactivation. *Nat. Catal.* 5, 854–866

Giulimondi, V., Ruiz–Ferrando, A., Clark, A.H., Kaiser, S.K., Krumeich, F., Martín, A.J., López, N., and Pérez-Ramírez, J. (2022). Catalytic synergies in bimetallic Ru-Pt single-atom catalysts via speciation control. *Adv. Funct. Mater.* 32, 2206513

Frei, M.S., Veenstra, F.L.P., Capeder, D., Stewart, J.A., Curulla-Ferré, D., Martín, A.J., Mondelli, C., and Pérez-Ramírez, J. (2021). Microfabrication enables quantification of interfacial activity in thermal catalysis. *Small Methods* 5, 2001231

Patents

Curulla-Ferré, D., Drouilly, C., Martín, O., Mondelli, C., Pérez-Ramírez, J., Martín, A.J. (2017). Process for methanol synthesis using an indium oxide based catalyst, WO2017118573

Curulla-Ferré, D., Drouilly, C., Martín, O., Mondelli, C., Pérez-Ramírez, J., Martín, A.J. (2017). Supported indium oxide catalyst and process for methanol synthesis using the same, WO2017118572

Martín, A.J., Martínez-Chaparro, A.A. (2013) Method for the preparation of electrodes for polymeric membrane fuel cells, WO2013190158A1

Book chapters

Martín, A.J., Hornés, A., Martínez-Arias, A., and Daza, L. (2013). Chapter 15 - Recent Advances in Fuel Cells for Transport and Stationary Applications. In *Renewable Hydrogen Technologies*, L. M. Gandía, G. Arzamendi, and P. Diéguez, eds. (Elsevier), pp. 361–380.

Contributions to Scientific Meetings

>70 contributions as first or co-author to national and international conferences (14 oral). 1 invited lecture. The full list of contributions can be found in the annex

Organization of Scientific Meetings

- | | |
|------|--|
| 2014 | Coordinator of the scientific committee of the I Iberian Congress on Fuels Cells (IBERCONAPPPICE), Spain |
| 2012 | Coordinator of the scientific committee of the V Spanish Congress on Fuels Cells (CONAPPPICE), Spain |

Scholarships and Prizes

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|-------------|--|
| 2012 | Invited Researcher to the Campus Nobel, Spain |
| 2005 – 2009 | Predocorial National Grant. Ministry of Science, Spain |
| 2002 | Best national engineering student prize. Rafael Escolá Foundation, Spain |

Memberships

Swiss Chemical Society | Spanish Association of Fuel Cells

Annex

Academic Projects

- 16 National Center of Competence in Research for Catalysis, Phase II (NCCR Catalysis). Swiss National Research Foundation. Javier Pérez-Ramírez. (ETH Zürich, Switzerland). 2024-2028.
- 15 National Center of Competence in Research for Catalysis, Phase I (NCCR Catalysis). Swiss National Research Foundation. Javier Pérez-Ramírez. (ETH Zürich, Switzerland). 2020-2024.
- 14 Catalytic systems for hydrogenolysis-based upcycling of plastic waste (ETH Grant). Javier Pérez-Ramírez. (ETH Zürich, Switzerland). 2021-2024.
- 13 Microstructured electrocatalysts as design platforms for efficient ammonia synthesis and carbon dioxide fixation in artificial leaves (ETH grant). Javier Pérez-Ramírez. (ETH Zürich, Switzerland). 2019-2022.
- 12 A-LEAF-732840, An Artificial Leaf: a photo-electro-catalytic cell from earth-abundant materials for sustainable solar production of CO₂-based chemicals and fuels. European Union under Horizon 2020. Jose Ramón Galán-Mascarós. (ETH Zürich, Switzerland). 2016-2020.
- 11 Design of electrocatalysts for the conversion of CO₂ into valuable chemicals (ETH grant). Javier Pérez-Ramírez. (ETH Zürich, Switzerland). 2014-2017.
- 10 Energetic Diversification Strategy based on Power Generation Systems based on Fuel Cells. Loreto Daza Bertrand. (Instituto de Catálisis y Petroleoquímica, Spain). 2013-2015.
- 9 Research and preparation of microporous thin films for electrochemical conversion of energy in fuel cells. Ministerio de Ciencia e Innovación. Antonio Martínez Chaparro. (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas, Spain). 2012-2014.
- 8 Diversificación energética mediante sistemas de generación basados en pilas de combustible (DIVERCEL-CM) (Energetic Diversification Strategy based on Power Generation Systems based on Fuel Cells). Comunidad de Madrid. Loreto Daza Bertrand. (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas, Spain). 2009-2014.
- 7 Hydrogen-based technologies as a solution for SMEs, CEB-H₂. Ministerio de Ciencia e Innovación. Investigación. Jose Antonio Dominguez Vazquez. (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas, Ciemat). 2008-2010.
- 6 Desarrollo de nuevos catalizadores preparados por electrodeposición para conversión electroquímica de energía" (DECATEL)) (New electrodeposited catalysts for electrochemical conversion of energy). Ministerio de Ciencia e Innovación. Antonio Martínez Chaparro. (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas, Spain). 2007-2010.
- 5 Desarrollos tecnológicos hacia el ciclo urbano del agua autosostenible (SOSTAQUA) CENT 2007-1039 (Technological advances through a self-sustainable water cycle). Centro para el Desarrollo Tecnológico Industrial. José Flores. (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas, Spain). 2007-2010.
- 4 Program for the optimization of regional energy resources through PEMFC and SOFC. Comunidad de Madrid. Loreto Daza Bertrand. (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas, Spain). 2006-2009.
- 3 Microstructured designed electrodes for PEMFC. Ministerio de Ciencia e Innovación. Investigación. (Instituto de Catálisis y Petroleoquímica, Spain). 2005-2008.
- 2 Development of new catalysts for PEMFC. Ministerio de Ciencia y Tecnología. Loreto Daza Bertrand. (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas, Spain). 2003-2006.
- 1 Fuel Cells innovative remote systems for telecom (FIRST). Unión Europea, Energy Program. Manuel Vázquez. (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas, Spain). 2000-2005.

Industrial Projects

- 7 Catalytic conversion of CO_x to higher alcohols. Sulzer Chemtech AG. Javier Pérez-Ramírez. 2022-2025
- 6 Carbamate synthesis. Covestro. Javier Pérez-Ramírez. 01.2020-01.2021.
- 5 Design of catalysts for styrene production based on zeolites. Thyssen Krupp IS. Javier Pérez-Ramírez. 2016-2017.
- 4 Visualization of Technical Catalysts. Zeochem AG. Javier Pérez-Ramírez. 01.01.2016-01.07.2016.
- 3 Methanol Synthesis. Total Research & Technology Feluy. Javier Pérez-Ramírez. 2013-2016.
- 2 Design and construction of a test bench for hydrogen production by bioethanol reforming Abengoa Hidrógeno S.A. Antonio José Martín. (Abengoa Hidrógeno S.A.). 2012-2014.
- 1 Design and manufacturing of a prototype for biogas conversion into electrical energy by means of fuel cells. Empresa municipal de aguas de Murcia, S.A. Olea S.A. 2010-2012.

Communications to Scientific Meetings

- 70 P. Preikschas; J. Zhang; R.R. Seemakurthi; Z. Lian; A.J. Martín; S. Xi; N. López; B.S. Yeo; J. Pérez-Ramírez. Selective CO₂ electroreduction to C₁-C₇ hydrocarbons on cobalt catalysts. International Catalysis Conference. Oral. (2024). France.
- 69 A. Nabera; A.J. Martín; I.-R. Istrate; J. Pérez-Ramírez; G. Guillén-Gosálbez. The evolution of environmental impacts of platform chemicals linked to climate policies. International Catalysis Conference. Oral. (2024). France.
- 68 A.J. Martín; S.D. Jaydev; M.-E. Usteri; K. Chikri; H. Eliasson; R. Erni; J. Pérez-Ramírez. Chemical recycling of commercial-grade polyolefins over titania-supported ruthenium nanoparticles via hydrogenolysis. International Catalysis Conference. Oral. (2024). France.
- 67 S.D. Jaydev; A.J. Martín; M.-E. Usteri; K. Chikri; H. Eliasson; R. Erni; J. Pérez-Ramírez. Chemical recycling of polyolefins on TiO₂-supported Ru nanoparticles. 10th UK Catalysis Conference. Oral. (2024). UK.
- 66 M. Suvana; T. Zou; S.H. Chong; Y. Ge; A.J. Martín; J. Pérez-Ramírez. Active learning streamlines development of high performance multimetallic catalysts for higher alcohol synthesis. SCS Fall Meeting. Swiss Chemical Society. Oral. (2024). Switzerland.
- 65 P. Preikschas; J. Zhang; R.R. Seemakurthi; Z. Lian; A.J. Martín; S. Xi; Y. Zhou; N. López; B.S. Yeo; J. Pérez-Ramírez. CO₂ electroreduction to long-chain hydrocarbons on cobalt catalysts. SCS Fall Meeting. Swiss Chemical Society. Oral. (2024). Switzerland.
- 64 A.J. Martín; S.D. Jaydev; D. Garcia; K. Chikri; J. Pérez-Ramírez. Enhancing catalyst effectiveness in chemical polyolefin recycling. SCS Fall Meeting. Swiss Chemical Society. Poster. (2024). Switzerland.
- 63 Y. Ge; T. Zou; A.J. Martín; J. Pérez-Ramírez. Defective zirconia promotes monometallic iron catalysts for higher alcohol synthesis. SCS Fall Meeting. Swiss Chemical Society. Poster. (2024). Switzerland.
- 62 Y. Ge; T. Zou; A.J. Martín; J. Pérez-Ramírez. ZrO₂-Promoted CuCo, CuFe and CoFe Catalysts for Higher Alcohol Synthesis from Syngas. SCS Fall Meeting. Swiss Chemical Society. Poster. (2023). Switzerland.

- 61 Y. Zhou; A.J. Martín; F. Dattila; S. Xi; P. Preikschas; N. López; J. Pérez-Ramírez; B.S. Yeo. Multicarbon Products by CO₂ Electroreduction Using Polarized Nickel Catalysts. Europacat. Oral. (2023). Czech Republic.
- 60 S.D. Jaydev; K. Chikri; M.-E. Usteri; A.J. Martín; J. Pérez-Ramírez. The key role of reaction engineering in hydrogenolysis of HDPE and PP. Gordon Research Conference on Plastic Recycling. Poster. (2023). USA.
- 59 P. Preikschas; A.J. Martín; J. Pérez-Ramírez. Liquid product quantification via NMR in CO₂ electrocatalytic reduction over phosphate-derived nickel catalysts. SCS Fall Meeting. Swiss Chemical Society. Poster. (2023). Switzerland.
- 58 S. Jaydev; K. Chikri; M.-E. Usteri; A.J. Martín; J. Pérez-Ramírez. The key role of reaction engineering in catalytic recycling of HDPE and PP. SCS Fall Meeting. Swiss Chemical Society. Poster. (2023). Switzerland.
- 57 A.Nabera; I.-R. Istrate; A.J. Martín; J. Pérez-Ramírez; G. Guillén-Gosálbez. Green Chemicals: The Ultimate Win-Win Solution Amidst Europe's Energy Crisis. SCS Fall Meeting. Swiss Chemical Society. Oral. (2023). Switzerland.
- 56 S.D. Jaydev; M.E. Usteri; A.J. Martín; J. Pérez-Ramírez. Recycling of waste polypropylene into high-value liquid hydrocarbons. SCS Fall Meeting. Swiss Chemical Society. Poster. (2022). Switzerland.
- 55 S. D'Angelo; A.J. Martín; J. Pérez-Ramírez; G. Guillén-Gosálbez. Planetary footprints of low-carbon ammonia. SCS Fall Meeting. Swiss Chemical Society. Oral. (2021). Switzerland.
- 54 S. Jaydev; A.J. Martín; J. Pérez-Ramírez. Selective conversion of polypropylene into motor oil on carbon-supported platinum catalysts. SCS Fall Meeting. Swiss Chemical Society. Poster. (2021). Switzerland.
- 53 F. Veenstra; A.J. Martín; J. Pérez-Ramírez. Laser-microstructured copper reveals selectivity patterns in the electrocatalytic reduction of CO₂. SCS Fall Meeting. Swiss Chemical Society. Poster. (2020). Switzerland.
- 52 F. Veenstra; A.J. Martín; J. Pérez-Ramírez. In₂O₃/Cu₃N as a selective and highly stable catalyst for the electroreduction of carbon dioxide. SCS Fall Meeting. Swiss Chemical Society. Poster. (2019). Switzerland.
- 51 A.J. Martín. Synergistic effects in multicomponent CO₂ reduction electrocatalysts. Bunsen Discussion. Deutsche Bunsen Gesellschaft. Oral (invited). (2019). Italy.
- 50 G. Larrazabal; A.J. Martín; J. Pérez-Ramírez. Enhanced electrochemical reduction of CO₂ over Cu-based catalysts modified with p-block elements. SCS Fall Meeting. Swiss Chemical Society. Poster. (2017). Switzerland.
- 49 G. Larrazabal; T. Shinagawa; A.J. Martín; J. Pérez-Ramírez. Magic at the interface: model multicomponent electrodes with controlled interfacial geometry for the electrocatalytic reduction of CO₂. SCS Fall Meeting. Swiss Chemical Society. Poster. (2017). Switzerland.
- 48 G. Larrazabal; A.J. Martín; J. Pérez-Ramírez. Silver-indium catalysts for the electrochemical reduction of carbon dioxide. SCS Fall Meeting. Swiss Chemical Society. Poster. (2015). Switzerland.
- 47 G. Larrazabal; A.J. Martín; J. Pérez-Ramírez. Novel silver-indium catalysts for the electrochemical reduction of CO₂. Third International Symposium on Green Chemistry. Private entity. Poster. (2015). France.
- 46 A.J. Martín; C. Maffiote; A.M. Chaparro. Mechanism for the growth of thin films of WO₃ and tungsten bronzes from suspensions of WO₃ nanoparticles. 226th ECS meeting. Electrochemical Society. Oral. (2014). Mexico.

- 45 G. Larrazabal; A.J. Martín; J. Pérez-Ramírez. Electrocatalytic reduction of carbon dioxide by thiol-protected Ag₄₄ nanoclusters. SCS Fall Meeting. Swiss Chemical Society. Poster. (2014). Switzerland.
- 44 A.J. Martín; T. González Ayuso; C. Montoro; J.A. Daza; J.L. Serrano; A. Balbín; L. Daza. A multi-fuel processor test bench based on reforming coupled to a fuel cell as a previous stage to industrial scale-up. European Hydrogen Energy Conference EHEC. Poster. (2014). Spain.
- 43 A.J. Martín; A.M. Chaparro. Influence of operation parameters on the response of a PEMFC with electrodeposited Pt-WO₃ cathode. 4th European PEFC and H₂ forum. Oral. (2013). Switzerland.
- 42 P. Ferreira-Aparicio; A.J. Martín; M.A. Folgado; A.M. Chaparro. Study of electrospray deposited catalyst layers in air-breathing single cells for portable applications. 4th European PEFC and H₂ forum. Poster. (2013). Switzerland.
- 41 A.J. Martín; A.M. Chaparro. Estudio de la microestructura de láminas delgadas electrodepositadas de Pt-WO₃/C para reducción de oxígeno. V Congreso Nacional de Pilas de Combustible CONAPPICE. Oral. (2012). Spain.
- 40 A.Serrano-Lotina; G. Muñoz; L. Rodríguez; A.J. Martín; L. Daza. Influencia del material del reactor para reformado de metano con dióxido de carbono. V Congreso Nacional de Pilas de Combustible CONAPPICE. Poster. (2012). Spain.
- 39 T. González Ayuso; A.J. Martín; J.L. Serrano; L. Daza. Influencia de la composición del combustible en la operación de una PEMFC. V Congreso Nacional de Pilas de Combustible CONAPPICE. Poster. (2012). Spain.
- 38 J.A. Daza; A.J. Martín; L. Daza. La termografía infrarroja como herramienta para analizar la homogeneidad de capas catalíticas en electrodos para pilas de combustible tipo PEM. V Congreso Nacional de Pilas de Combustible CONAPPICE. Poster. (2012). Spain.
- 37 T. González Ayuso; A.J. Martín; J.L. Serrano; L. Daza. Operación de un procesador de combustible. V Congreso Nacional de Pilas de Combustible CONAPPICE. Poster. (2012). Spain.
- 36 A.Serrano-Lotina; A.J. Martín; M.A. Folgado; R. Padilla; L. Daza. Oxidación selectiva de CO en corrientes gaseosas ricas en hidrógeno procedentes de reformado de metano. V Congreso Nacional de Pilas de Combustible CONAPPICE. Poster. (2012). Spain.
- 35 M.A. Folgado; A.M. Chaparro; A.J. Martín; P. Ferreira; T. González-Ayuso. Puesta a punto de un método para la determinación de la permeabilidad de materiales utilizados en electrodos PEMFC. V Congreso Nacional de Pilas de Combustible CONAPPICE. Poster. (2012). Spain.
- 34 J. Fernández-Moreno; G. Guelbenzu; A.J. Martín; M.A. Folgado; P. Ferreira-Aparicio; A.M. Chaparro. Sistema portátil con monocelda PEMFC 'Air-Breathing'. V Congreso Nacional de Pilas de Combustible CONAPPICE. Oral. (2012). Spain.
- 33 J.A. Daza; A.J. Martín; L. Daza. Termografía aplicada a la monitorización de procesadores de combustible. V Congreso Nacional de Pilas de Combustible CONAPPICE. Poster. (2012). Spain.
- 32 A.J. Martín; T. González Ayuso; J.L. Serrano; J. Mielgo; L. Daza. Operación de un procesador novedoso de biogás basado en reformado seco para producción de energía eléctrica mediante pilas de combustible. XXIII Congreso Iberoamericano de Catalisis. Oral. (2012). Argentina.
- 31 A.J. Martín. Towards a green hydrogen economy: current status and expected future. Cantabria Campus Nobel. Poster. (2012). Spain.
- 30 A.J. Martín; A.M. Chaparro. Parameters optimization of the electrodeposition of Pt-WO₃ based electrodes for PEMFC application. Fuel Cells Science & Technology. A Grove Fuel Cell Event. Poster. (2012). UK.

- 29 J. Fernández-Moreno; G. Guelbenzu; A.J. Martín; P. Ferreira-Aparicio; A.M. Chaparro. New system design for power generation from an air-breathing single PEM cell. Fuel Cells Science & Technology. A Grove Fuel Cell Event. Poster. (2012). UK.
- 28 A. Serrano-Lotina; A.J. Martín; M.A. Folgado; G. Muñoz; L. Daza. Hydrogen production from biogas reforming using hydrotalcite-derived catalysts promoted with La: influence of Mg/Al molar ratio. European Fuel Cell – Piero Lunghi Conference & Exhibition. Oral. (2011). Italy.
- 27 G. Muñoz; A. Serrano-Lotina; A.J. Martín; M.A. Folgado; L. Daza. Influence of pressure and catalyst weight to inlet flow ratio over biogas dry reforming catalysts. European Fuel Cell – Piero Lunghi Conference & Exhibition. Poster. (2011). Italy.
- 26 A.J. Martín; T. González Ayuso; J.L. Serrano; J. Mielgo; L. Daza. Influence of some critical operation parameters on the performance of a 5 m³/h biogas processing plant for electricity generation based on dry reforming and low-temperature fuel cells. European Fuel Cell – Piero Lunghi Conference & Exhibition. Poster. (2011). Italy.
- 25 A.J. Martín; T. González Ayuso; J. Mielgo; J.L. Serrano; L. Daza. Operation of a biogas processing plant for electrical energy generation based on dry reforming and low-temperature fuel cells. European Fuel Cell – Piero Lunghi Conference & Exhibition. Poster. (2011). Italy.
- 24 J.A. Daza; A.J. Martín; A.M. Chaparro; T. González Ayuso; L. Daza. Thermal analysis of a fuel cell by infrared thermography. European Fuel Cell – Piero Lunghi Conference & Exhibition. Poster. (2011). Italy.
- 23 A.J. Martín; T. González Ayuso; J. Mielgo; J.L. Serrano; L. Daza. Analysis of a biogas processing plant coupled with a low-temperature fuel cell. Fuel Cell Seminar & Exposition, Orlando-USA. Poster. (2011). USA.
- 22 A.Serrano-Lotina; L. Rodríguez; G. Muñoz; M.A. Folgado; L. Daza. Influence of temperature reaction and reactant feeding on biogas reforming. Fuel Cell Seminar & Exposition, Orlando-USA. Poster. (2011). USA.
- 21 A.Serrano-Lotina; A.J. Martín; M.A. Folgado; R. Padilla; L. Daza. Influence of feeding composition over CO preferential oxidation. 9th Green Chemistry Conference. Poster. (2011). Italy.
- 20 A.J. Martín; A.M. Chaparro; L. Daza. EQCM study of the electrodeposition of Pt-WO₃ and its catalytic activity towards the ORR. 218th meeting of the Electrochemical Society. Poster. (2010). USA.
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