

REPORTE DE PUBLICACIONES CIENTÍFICAS

Junio 2024

RL1

Contaminants of emerging concern: Occurrence, analytical techniques, and removal with electrochemical advanced oxidation processes with special emphasis in Latin America

M. A. Sandoval, W. Calzadilla, J. Vidal, E. Brillas, R. Salazar-González

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Electrogeneration of H₂O₂ through carbon-based ink on Al foam for electro-Fenton treatment of micropollutants in water

C. Rivera-Vera, M. A. Rodrigo-Rodrigo, C. Saez, A. Thiam, R. Salazar-González

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Enhancing industrial swine slaughterhouse wastewater treatment: Optimization of electrocoagulation technique and operating mode

M. A. Sandoval, O. Coreño, V. García, R. Salazar-González

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Latin America's Renewable Energy Impact: Climate Change and Global Economic Consequences

J. Moreno, J. P. Molina, R. Palma-Behnke

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RL2

Towards CSP technology modeling in power system expansion planning

V. Norambuena-Guzmán, R. Palma-Behnke, C. Hernández-Moris, M. Teresa Cerda, Á. Flores-Quiroz

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RL3

Research trends and gaps in experimental applications of phase change materials integrated in buildings

M. Vega, P. E. Marín, S. Ushak, S. Shire

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Typical solar extinction year at Plataforma Solar de Almería (Spain). Application to thermoelectric solar tower plants

N. Simal, J. Ballestrín, E. Carra, A. Marzo, J. Polo, J. Barbero, J. Alonso-Montesinos, G. López
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Highly efficient and reusable CuAu nanoparticles supported on crosslinked chitosan hydrogels as a plasmonic catalyst for nitroarene reduction

O. Ramírez, S. Bonardd, C. Saldías, A. Leiva, D. Díaz Díaz
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Enhancing c-Si Solar Cell Efficiency in the UV Region: Photophysical Insights into the Use of Eu³⁺ Complexes for Down-Shifting Layer Applications

F. Vargas, R. Nelson, D. Espinoza, I. Brito, L. Sánchez-Muñoz, P. Alemany, S. Ortiz, P. Ferrada, - A. Mestra, J. Llanos.
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 **RL4**

Multi-objective deep reinforcement learning for a water heating system with solar energy and heat recovery

A. Riebel, J. M. Cardemil, E. López
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 **RL5**

Observability and Observed-Based Control for a Class of Output Modular Systems With Application to Modular Multilevel Power Converters

J. A. Gallegos, F. Rubio, J. Pereda and F. Núñez
Publicado en IEEE Xplore [click here](#)

Design, Analysis, and Experimental Verification of Arm Link Enhanced Modular Multilevel Converter

R. Aguilar, L. Tarisciotti, J. Pereda.
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Predictive Optimal Variable-Angle PS-PWM Strategy for Cascaded H-Bridge Converters

P. Poblete, J. Gajardo, R. H. Cuzmar, R. P. Aguilera, J. Pereda, D. Lu, A. M. Alcaide
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Dual-Purpose Converters for DC or AC Grid as Energy Transition Solution: Perspectives and Challenges

O. Husev, D. Vinnikov, S. Kouro, F. Blaabjerg, C. Roncero-Clemente

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An Instantaneous Power Theory Extension for the Inter-Phase Power Imbalance Problem

R. P. Aguilera, P. Acuna, C. A. Rojas, J. Pou, G. Konstantinou, E. H. Watanabe.

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Transformerless partial power converter topology for electric vehicle fast charge

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Power Imbalance Analysis of Modular Multilevel Converter With Distributed Energy Systems

T. Salvadores, J. Pereda, F. Rojas.

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Humidity and Harmonic Current Considerations for Indices to Estimate Contamination Levels on HV Insulators

R. J. Villalobos, L. A. Moran, M. Inostroza, A. Hoffer, G. C. Pesce, F. Huenupán.

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Modelling and scenario analysis of social management for adaptation to climate change: The case of large mining in Chile

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A Honeycomb-Like Predictive Controller With a Reduced Computational Burden for Three-Level NPC Converters

J. J. Silva, J. A. Rohten, F. A. Villarroel, E. S. Pulido, M. E. Rivera

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Design and Performance Evaluation of a Photovoltaic Greenhouse as an Energy Hub with Battery Storage and an Electric Vehicle Charger

M. A. Torres, D. Muñoz, C. Burgos, D. Casagrande, J. Ortiz, H. Reyes.

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A Review on Weighting Factor Design of Finite Control Set Model Predictive Control Strategies for AC Electric Drives

E. Zerdali, M. Rivera, P. Wheeler.

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Status and Outlook of Copper Mining Electrification: Empowering the future: Navigating the transformative landscape of copper mining electrification in Chile

D. Sbarbaro, L. Morán.

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INVESTIGACIONES INTERLÍNEAS

RL2 - RL4

Techno-economic analysis of hybrid solar thermal systems with flat plate and parabolic trough collectors in industrial applications

J. F. Rosales-Pérez, A. Villarruel-Jaramillo, M. Pérez-García, J. M. Cardemil, R. Escobar.

Publicado en Science Direct [click here](#)

Assessing the performance of novel molten salt mixtures on CSP applications

Autores: *A. R. Starke, J. M. Cardemil, V. R. B. Bonini, R. Escobar, M. Castro-Quijada, Á. Videla.*

Publicado en Science Direct [click here](#)

Compatibility assessment of thermal energy storage integration into industrial heat supply and recovery systems

I. Wolde, J. M. Cardemil, R. Escobar.

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Assessing system-level synergies between photovoltaic and proton exchange membrane electrolyzers for solar-powered hydrogen production

I. Arias, F. G. Battisti, J.A. Romero-Ramos, M. Pérez, L. Valenzuela, J. Cardemil, R. Escobar

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RL5 - RL7

Renewable Source-Based Water Pumping Electrification in Mines: Current technologies and future trends

J. Riedemann, E. Reyes, N. Sarasiri, R. Pena, I. Andrade.

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