

GINA PECCHI SANCHEZ

DOCTOR EN CIENCIAS CON MENCIÓN EN QUÍMICA, UNIVERSIDAD DE CONCEPCIÓN

1986, CHILE

LÍNEA(S) DE INVESTIGACIÓN O ÁREAS DE TRABAJO

- ✓ CATALISIS HETEROGENEA
- ✓ CATALISIS POR METALES
- ✓ CATALIZADORES PREPARADOS POR EL METODO SOL-GEL
- ✓ CATALISIS AMBIENTAL

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

- ✓ Claudia Campos Urrutia, 13-08-08

“Estudio de las Propiedades Magnéticas y Ordenamiento Estructural en Catalizadores de Reacciones de Combustión Completa”

NÚMERO DE TESIS DIRIGIDAS O ACTIVIDAD FORMATIVA EQUIVALENTE GUIADAS EN EL PROGRAMA, EN LOS ÚLTIMOS 10 AÑOS (FINALIZADAS)

- ✓ Ruddy Morales B., 14-01-2014

“Obtención de Nanopartículas de Rh- y Ni-modificadas como catalizadores en Reacciones de Hidrogenación”

LISTADO DE PUBLICACIONES EN LOS ÚLTIMOS 10 AÑOS.

C. Franchini, W Aranzaez, A.M. Duarte de Farias, G Pecchi, MA Fraga *“Ce-substituted LaNiO₃ mixed oxides as catalysts for glycerol steam reforming” Applied Catalysis B: environmental, 147 (2014) 193-202*

N Escalona, W Aranzaez, K Leiva, N Martinez, Gina Pecchi *“Ni nanoparticles prepared from Ce substituted LaNiO₃ for the guaiacol conversion” Applied catalysis A: General (2014) in press*

G. Pecchi, B. Cabrera, E.J. Delgado, A.L. Gordon, R. Jimenez *“Catalytic oxidation of soot over alkaline niobate” Journal of Alloys and Compounds, 551 (2013) 255-261.*

G. Pecchi, B. Cabrera, E.J. Delgado, X. García, R. Jimenez “Activity of KNbO_3 as catalyst for soot combustion. Effect of the preparation method” **Appl. Catal A. General**, **453** (2013) 341-348.

O Perez de Berti, MV Cagnoli, G Pecchi, JL Alessandrini, SJ Stewart, JF Bengoa, SG Marchetti “Alternative low-cost approach to the synthesis of magnetic iron oxide nanoparticles by thermal decomposition of organic precursors” **Nanotechnology**, **24** (2013) 175601.

G Pecchi, R Morales “Effect of copper on the catalytic activity for acetylacetate combustion of $\text{Ca}_{1-x}\text{Cu}_x\text{ZrO}_3$ and $\text{Sr}_{1-x}\text{Cu}_x\text{ZrO}_3$ perovskite type oxides” **J. Chil Chem Soc**, **58**(4) (2013) 1941-1946

Jocielys Jovelino Rodrigues, Gina Pecchi, Fabiano Andre Narciso Fernandes, Meiry Glauca Freire Rodrigues “Ruthenium promotion of Co/SBA-15 catalysts for Fischer–Tropsch synthesis in slurry-phase reactors” **Journal of Natural Gas Chemistry**, **21** (2012) 1-7

Gina Pecchi, P. Reyes. R.Zamora. C. Campos, L.E.Cadús, B.P. Barbero “Effect of the preparation method on the catalytic activity of $\text{La}_{1-x}\text{Ca}_x\text{FeO}_3$ perovskite-type oxides” **Catal Today**, **133-135** (2008) 420-427.

Gina Pecchi, C campos, O. Peña, L.E. Cadús “Structural, magnetic and catalytic properties of perovskite-type mixed oxides $\text{LaMn}_{1-y}\text{Co}_y\text{O}_3$ ($y=0.0, 0.1, 0.3, 0.5, 0.7, 0.9, 1.0$)” **J Mol Catal A: General**, **282** (2008) 158-166.

G. Pecchi, M.G. Jiliberto, E.J. Delgado, L.E. Cadús, J.L.G. Fierro “Effect of B-site cation on the catalytic activity of $\text{La}_{1-x}\text{Ca}_x\text{BO}_3$ ($B = \text{Fe}, \text{Ni}$) perovskite-type oxides for toluene combustion” **J. Chem. Tech. Biotechnol.** **86** (2011) 1067-1073.

G. Pecchi, M.G. Jiliberto, A. Buljan, E.J. Delgado “Relation between defects and catalytic activity of calcium doped LaFeO_3 perovskite”. **Solid State Ionics**, **187** (2011) 27-32.

S. Aguila, R. Vásquez-Duhalt, C. Covarrubias, G. Pecchi, J. B. Alderete "Enhancing oxidation activity and stability of iso-1-cytochrome c and chloroperoxidase by immobilization in nanostructured supports" **J Molecular Catalysis B: Enzymatic**, **70** (2011) 81 – 87

G Pecchi, C. Campos, O. Peña "Effect of the calcination temperature and the RE nature cation on the properties of perovskite-type mixed oxides $RECo_{0.5}Mn_{0.5}O_3$ (RE: La, Er, Y)" **CatalToday**, **172** (2011) 111-117.

BV de Souza, MGF Rodrigues, LA Cano, MV Cagnoli, JF Bengoa, SG Marchetti, G Pecchi "Study of the effect of cobalt content in obtaining olefins and paraffins using the Fischer-Tropsch reaction" **Catalysis Today**, **172** (2011) 152-157.

Catalysis in Iberoamerica Selected Papers from XXII Iberoamerican Congress Preface. Catalysis Today, **172** (2011) 1-1

E. J. Delgado, M. G. Jiliberto, Gina Pecchi "Kinetic study on methane combustion over Ca doped $LaFeO_3$ perovskites" **J Chil Chem Soc**, **56** (2011) 895-900

C. Urbina, G. Pecchi, C. Campos, P. Reyes "Enantioselective hydrogenation of 1-phenyl-1,2-propanodione on Pt/ZrO_2 catalysts" **J. Chil. Chem. Soc**, **55** (1) (2010) 25-30.

F Rioseco, L Radovic, X García, A Gordon, G Pecchi "Effect of Ag additive on the thermal stability and catalytic properties of $LaFeO_3$ perovskite" **J. Chil. Chem. Soc**, **55** (1) (2010) 44-49.

R. Jiménez, R. Zamora, G. Pecchi, X. García, A.L. Gordon "Effect of Ca-substitution in $La_{1-x}Ca_xFeO_3$ perovskites on the catalytic activity for soot combustion" **Fuel Processing Technology**, **91** (2010) 546 – 549.

CM Campos, G. Pecchi, A.B. Antunes, O. Peña "Magnetic domains and field-induced transitions in nanosized $ErCo_{0.5}Mn_{0.5}O_3$ " **Journal of Physics: Conference Series**, **200** (3) (2010) 032010.

C. Urbina, C. Campos, G. Pecchi, C. Claver, P. Reyes "Chiral Pt/ZrO₂ catalyts. Enantioselective hydrogenation of 1-phenyl-1,2-propanedione Molecules-heterogeneous" **Molecules**, **15** (2010) **3428-3440**

N. Escalona, S.Fuentealba, Gina Pecchi "Fischer-Tropsch synthesis over LaFe_{1-x}CoxO₃ perovskites from a simulated biosyngas feed" **Appl. Catal. A. General**, **381** (2010) **253-260**

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C. Campos, G. Pecchi, Y. Moreno, C. Moure, V. Gil, P. Barahona, O. Peña "Mn-substituted perovskites RECo_xMn_{1-x}O₃: a comparison between LaCo_xMn_{1-x}O₃ and GdCo_xMn_{1-x}O₃", **Bol Soc Esp Ceram V.** **47(4)** (2008) **207 –212.**

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G Pecchi, CM Campos, MG. Jiliberto, Y Moreno, O Peña, "Doping of lanthanum cobaltite by Mn: thermal, magnetic and catalytic effect" **Journal of Material Science**, **43 (2008) 5282 -5290**

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N. Marin-Astorga, G. Pecchi, P. Reyes "Ordered mesoporous silicates of MCM-41 type as supports of Pt catalysts for the enantioselective hydrogenation of 1-phenyl-1,2-propanedione". **React. Kinet. Catal. Lett.**, **87 (2006) 121-128**.

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G. Pecchi, P. Reyes, R. Zamora, T. López, R. Gómez, "Effect of the promoter and support in the catalytic activity of Pd-CeO₂-supported catalysts" **J. Chem. Tech. Biotechnol.** **80 (2005) 268 – 272.**

T. López, A. Hernández, X. Bokhimi, L. Torres, A. García, G. Pecchi, "Sol-gel Titania modified with Ba and Li atoms for catalytic combustion" **J. Material Science.** **39 (2004) 565-570.**

Bersani, P.P. Lottici, G. Rangel, E. Ramos, G. Pecchi, R. Gómez, T. López. "Micro-Raman study of indium doped zirconia obtained by sol-gel" **D J. Non-Crystalline Solids** **345-346 (2004) 116-119.**

G. Pecchi, P. Reyes, R. Zamora, T. López, R. Gómez "Pd-CeO₂ and Pd-La₂O₃/alumina supported catalysts: Their effect on the catalytic combustion of methane" **J. Non-Crystalline Solids** **345-346 (2004) 624-627.**

G. Pecchi, P. Reyes, J. Villaseñor "Fe supported catalysts prepared by the sol-gel method. Characterization and evaluation in pentachlorophenol abatement" **J. Sol-Gel Sci. Technol.** **26 (2003) 865-867.**

G. Pecchi, P. Reyes, T. López, R. Gómez, A. Moreno, J.L.G. Fierro, A. Martínez-Arias "Catalytic combustion of methane on Fe/TiO₂ catalysts prepared by sol-gel method" **J. Sol-Gel Sci. Technol.**, **27 (2003) 205-214.**

N. Marin Astorga, J.L.G. Fierro, G. Pecchi, P. Reyes "Alkynes hydrogenation over Pd supported catalysts". *Catal. Lett.*, **91(2003) 115-121**.

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LISTADO DE PROYECTOS DE INVESTIGACIÓN EN LOS ÚLTIMOS 10 AÑOS

✓ Fondecyt102.04.61 (Marzo 2002 – Marzo 2006)

"Destrucción de compuestos orgánicos volátiles (COVs) y compuestos orgánicos volátiles clorados (COVCl) por oxidación catalítica".

Investigador Principal: G. Pecchi

Co-Investigador: P. Reyes

✓ CNRS-CONICYT 22785 (marzo 2009-enero 2011)

"Correlación entre propiedades magnéticas y catalíticas de perovskitas de $La_{1-x}A'_xCO_3$, $La_{1-x}A'_xMnO_3$ y $La_{1-x}A'_xCo_{0.5}Mn_{0.5}O_3$ ($A'=Er, Y$)".

Inv. Principal: Francia: O. Peña, Chile: Gina Pecchi

Co-Investigadores: A. Buljan, E. Delgado

✓ Fondecyt 106.07.02 (Marzo 2006-Marzo 2009)

"Eliminación de emisiones gaseosas industriales por oxidación catalítica sobre óxidos mixtos con estructura espinela"

Investigador Principal: G.Pecchi

Co-Investigador: P. Reyes

✓ CNRS-CONICYT 22785 (Marzo 2009-Enero 2011)

“Correlación entre propiedades magnética y catalíticas de perovskitas de $\text{La}_{1-x}\text{A}'\text{CoO}_3$, $\text{La}_{1-x}\text{A}'\text{MnO}_3$ y $\text{La}_{1-x}\text{A}'\text{Co}_{0.5}\text{Mn}_{0.5}\text{O}_3$ ($\text{A}'=\text{Er}, \text{Y}$)”

Investigador principal (Francia): O. Peña

Investigador Principal (Chile): G. Pecchi

Co-investigadores: A. Buljan, E. Delgado

✓ Fondecyt 109.00.18 (marzo 2009-marzo 2012)

“Thermal stability against reduction of $\text{La}_{1-x}\text{A}'\text{Co}_{0.5}\text{Mn}_{0.5}\text{O}_3$ ($\text{A}'=\text{Er}, \text{Y}$) perovskite type oxide catalysts”. (E)

Inv. Principal: Gina Pecchi

Co-Investigadores: Patricio Reyes, Eduardo Delgado

✓ FONDECYT 110.02.59 (Marzo 2010-Marzo 2013)

“Selective hydrogenation of nitro compounds on Au supported catalysts”

Investigador Principal: P. Reyes

Co-Investigador: G.Pecchi

✓ FONDECYT 113.30.05 (Marzo 2013-Marzo 2016)

“Structural stability and catalytic activity of lanthanum A-site perovskites”

Investigador Principal: G.Pecchi

Co-Investigador: P. Reyes