

CURRÍCULUM VITAE

Dr. Julián Cruz Borbolla

A *DATOS PERSONALES*

Nombre: Julián Cruz Borbolla
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Lugar y fecha de nacimiento: México, D. F., 16 de Abril de 1969.
Estado Civil: Casado.
Nacionalidad: Mexicana.
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B *DATOS LABORALES*

Nombramiento actual: Profesor Investigador "Titular B"
Lugar de adscripción: Área Académica de Química
Universidad Autónoma del Estado de Hidalgo
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C *CARGOS ACADEMICOS DESEMPEÑADOS*

Coordinador de Física 1 en la Facultad de Química de la UNAM.
México D.F. 2005-2007.

Profesor de asignatura "A" en la Facultad de Química de la UNAM.
México, D.F. 2003-2007.

Profesor de asignatura "Titular B" en el Área Académica de Química de la Universidad Autónoma del Estado de Hidalgo. Mineral de reforma, Pachuca-Hidalgo. 2007-Actual.

D *FORMACIÓN ACADEMICA*

Estancia Posdoctoral en la Universidad Autónoma Metropolitana.
Unidad Iztapalapa, Departamento de Química Cuántica, **2006-2007.**

Doctorado

TÍTULO: Ciencias Químicas
FECHA DE OBTENCIÓN DE GRADO: **24 DE JUNIO DE 2005.**
INSTITUCIÓN: Facultad de Química, UNAM
PAÍS: México.

Maestría

TÍTULO: Ciencias Químicas
FECHA DE OBTENCIÓN DE GRADO: **14 DE ABRIL DE 2000.**
INSTITUCIÓN: Facultad de Química, UNAM

PAÍS	México.
Licenciatura	
TÍTULO	QUÍMICO
FECHA DE OBTENCIÓN DE GRADO	23 DE MAYO DE 1996.
INSTITUCIÓN	Facultad de Química, UNAM
PAÍS	México

E NIVEL EN EL SNI

Nombramiento	Investigador Nacional Nivel II
Periodo	2014-2017
Nombramiento	Investigador Nacional Nivel 1
Periodo	2010-2013
Nombramiento	Investigador Nacional Nivel 1
Periodo	2007-2009
Nombramiento	Candidato Investigador Nacional (SNI)
Periodo	2004-2006
Área de la ciencia	Químico-Biológica
Disciplina	Química
Especialidad	Química y Física Teórica

F PRODUCCION CIENTÍFICA

ARTICULOS PUBLICADOS

1. Title: [Reactivity properties of derivatives of 2-imidazoline: An ab initio DFT study](#)

Author(s): **Cruz, J**; Martinez-Aguilera, LMR; Salcedo and M. Castro
Conference: 41st International Symposium on Atomic, Molecular, and Condensed Matter Theory Location: ST AUGUSTINE, FLORIDA Date: FEB 24-MAR 02, 2001
Source: INTERNATIONAL JOURNAL OF QUANTUM CHEMISTRY Volume: 85
Issue: 4-5 Pages: 546-556 DOI: 10.1002/qua.10018 Published: NOV-DEC 2001
Times Cited: [63](#) (from All Databases)

2. Title: [Experimental and theoretical study of the 3-amino-1,2,4-triazole and 2-aminothiazole corrosion inhibitors in carbon steel](#)

Author(s): **Cruz, J**; Garcia-Ochoa, E; Castro, M
Source: JOURNAL OF THE ELECTROCHEMICAL SOCIETY Volume: 150 Issue: 1
Pages: B26-B35 DOI: 10.1149/1.1528197 Published: JAN 2003
Times Cited: [23](#) (from All Databases)

3. Title: [Intramolecular hydrogen bonds in thiazole derivatives: An Ab initio and DFT study](#)

Foreign Title: [Puentes de hidrogeno intramoleculares en derivados tiazolicos. Un estudio teorico: Ab initio y DFT](#)

Author(s): Castro, Miguel; Sanchez-Viesca, Francisco; **Cruz, Julian**; et al.

Source: TIP Revista Especializada en Ciencias Quimico-Biologicas Volume: 6 Issue: 2 Pages: 74-80 Published: 2003

Times Cited: [1](#) (from All Databases)

4. Title: [Theoretical study of the Hg²⁺ recognition by 1,3-diphenyl-thiourea](#)

Author(s): Castro, M; **Cruz, J**; Otazo-Sanchez and Leonel Pérez-Marín.

Source: JOURNAL OF PHYSICAL CHEMISTRY A Volume: 107 Issue: 42 Pages: 9000-9007 DOI: 10.1021/jp030768g Published: OCT 23 2003

Times Cited: [18](#) (from All Databases)

5. Title: [Experimental and theoretical study of 1-\(2-ethylamino\)-2-methylimidazole as an inhibitor of carbon steel corrosion in acid media](#)

Author(s): **Cruz, J**; Martinez, R; Genesca, J., and E. García-Ochoa

Source: JOURNAL OF ELECTROANALYTICAL CHEMISTRY Volume: 566 Issue: 1 Pages: 111-121 DOI: 10.1016/j.jelechem.2003.11.018 Published: MAY 1 2004

Times Cited: [91](#) (from All Databases)

6. Title: [On the \(CHCu\)-Cu-... agostic interaction: chiral copper\(II\) compounds with ephedrine and pseudoephedrine derivatives](#)

Author(s): Castro, M; **Cruz, J**; Lopez-Sandoval, H., and Norah Barba-Behrens

Source: CHEMICAL COMMUNICATIONS Issue: 30 Pages: 3779-3781 DOI: 10.1039/b505554g Published: 2005

Times Cited: [16](#) (from All Databases)

7. Title: [Substituent effects in the migration step of the Baeyer-Villiger rearrangement. A theoretical study](#)

Author(s): Reyes, L; Castro, M; **Cruz, J**; and Rubio M.

Source: JOURNAL OF PHYSICAL CHEMISTRY A Volume: 109 Issue: 15 Pages: 3383-3390 DOI: 10.1021/jp040512q Published: APR 21 2005

Times Cited: [15](#) (from All Databases)

8. Title: [A new inhibitor for mild carbon steel: Electrochemical and DFT studies](#)

Author(s): **Cruz, J**; Pandiyan, T; Garcia-Ochoa, E

Source: JOURNAL OF ELECTROANALYTICAL CHEMISTRY Volume: 583

Issue: 1 Pages: 8-16 DOI: 10.1016/j.jelechem.2005.02.026 Published: SEP 1 2005

Times Cited: [45](#) (from All Databases)

9. Title: [A new specific mechanism for the acid catalysis of the addition step in the Baeyer-Villiger rearrangement](#)

Author(s): Alvarez-Idaboy, JR; Reyes, L; **Cruz, J**

Source: ORGANIC LETTERS Volume: 8 Issue: 9 Pages: 1763-1765 DOI:

10.1021/ol060261z Published: APR 27 2006

Times Cited: [54](#) (from All Databases)

10. Title: [Copper \(II\) complexes of novel octadentate ligands: DFT and experimental interpretations](#)

Author(s): Thangarasu, Pandiyan; **Cruz, Julian**; Bernes, Sylvain; et al.

Source: ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL

SOCIETY Volume: 233 Pages: 242-242 Meeting Abstract: 262-INOR Published: MAR 25 2007

Times Cited: 0 (from All Databases)

11. Title: [Interaction of imidazoline compounds with Fe-n \(n=1-4 atoms\) as a model for corrosion inhibition: DFT and electrochemical studies](#)

Author(s): Turcio-Ortega, D.; Pandiyan, T.; **Cruz, J.**; Garcia-Ochoa, E.

Source: JOURNAL OF PHYSICAL CHEMISTRY C Volume: 111 Issue: 27 Pages:

9853-9866 DOI: 10.1021/jp0711038 Published: JUL 12 2007

Times Cited: [17](#) (from All Databases)

12. Title: [Surface tension of hydrocarbon chains at the liquid-vapour interface](#)

Author(s): Noe Mendoza, Francisco; Lopez-Rendon, Roberto; Lopez-Lemus, Jorge; and **Julián Cruz** and José Alejandro.

Source: MOLECULAR PHYSICS Volume: 106 Issue: 8 Pages: 1055-1059 DOI:

10.1080/00268970802119694 Published: 2008

Times Cited: [6](#) (from All Databases)

13. Title: [DFT and electrochemical studies of tris\(benzimidazole-2-ylmethyl\)amine as an efficient corrosion inhibitor for carbon steel surface](#)

Author(s): Roque, Jacinto Morales; Pandiyan, T.; **Cruz, J.**; Garcia-Ochoa, E.

Source: CORROSION SCIENCE Volume: 50 Issue: 3 Pages: 614-624 DOI:

10.1016/j.corsci.2007.11.012 Published: MAR 2008

Times Cited: [34](#) (from All Databases)

14. Title: [DFT studies on the phenol and thiophenol interaction on an undecagold cluster surface](#)

Author(s): Jayanthi, N.; **Cruz, J.**; Pandiyan, T.

Source: CHEMICAL PHYSICS LETTERS Volume: 455 Issue: 1-3 Pages: 64-71

DOI: 10.1016/j.cplett.2008.01.090 Published: MAR 31 2008

Times Cited: [3](#) (from All Databases)

15. Title: [DFT and experimental studies of perchlorate ion coordination in cis/trans-copper\(II\) complexes of tetradentate pyridyl ligands](#)

Author(s): Pandiyan, Thangarasu; Guadalupe, Hernandez J.; **Cruz, Julian**; Sylvain Bernès, Víctor M. Ugalde-Salvdivar, and Ignacio González.

Source: EUROPEAN JOURNAL OF INORGANIC CHEMISTRY Issue: 21 Pages: 3274-3285 DOI: 10.1002/ejic.200800091 Published: JUL 2008

Times Cited: [2](#) (from All Databases)

16. Title: [Pyrite-arsenopyrite galvanic interaction and electrochemical reactivity](#)

Author(s): Urbano, Gustavo; Reyes, Victor E.; Veloz, M. Aurora; and Ignacio González, and **Julián Cruz**

Source: JOURNAL OF PHYSICAL CHEMISTRY C Volume: 112 Issue: 28 Pages: 10453-10461 DOI: 10.1021/jp800273u Published: JUL 17 2008

Times Cited: [1](#) (from All Databases)

17. Title: [Theoretical and experimental interpretations of phenol oxidation by the hydroxyl radical](#)

Author(s): Morales-Roque, J.; Carrillo-Cardenas, M.; Jayanthi, N.; **J. Cruz**, T. Pandiyan

Source: JOURNAL OF MOLECULAR STRUCTURE-THEOCHEM Volume: 910 Issue: 1-3 Pages: 74-79 DOI: 10.1016/j.theochem.2009.06.017 Published: SEP 30 2009

Times Cited: [5](#) (from All Databases)

18. Title: [Structural Changes in Cu-II Complexes of Potential Octadentate Ligands by Coordination with Carboxylate/Carboxylic Acid: DFT, TD-DFT, and Experimental Studies](#)

Author(s): Montiel, Enrique; **Cruz, Julian**; Jayanthi, Narayanan; S. Bernès, T. Pandiyan

Source: AUSTRALIAN JOURNAL OF CHEMISTRY Volume: 63 Issue: 6 Pages: 965-977 DOI: 10.1071/CH09555 Published: 2010

Times Cited: 0 (from All Databases)

19. Title: [DFT studies of alpha-diimines adsorption over Fe-n surface \(n=1, 4, 9 and 14\) as a model for metal surface coating](#)

Author(s): Camacho, R. -L.; Montiel, E.; Jayanthi, N.; T. Pandiyan and **J. Cruz**.

Source: CHEMICAL PHYSICS LETTERS Volume: 485 Issue: 1-3 Pages: 142-151 DOI: 10.1016/j.cplett.2009.12.016 Published: JAN 18 2010

Times Cited: [7](#) (from All Databases)

20. Title: [Reactivity of Tp\(Me₂\)Ir\(C₂H₄\)\(DMAD\) with carboxylic acids. A DFT study on geometrical isomers and structural characterization](#)

Author(s): Verónica Salazar, Gloria Sánchez-Cabrera, Francisco J. Zuno-Cruz, Oscar R. Suárez-Castillo, **Julián Cruz**, Rosa M. Padilla, Martín Hernández, Arián Espinosa, Celia M. Maya, Marco A. Leyva, and María J. Rosales-Hoz

Source: JOURNAL OF ORGANOMETALLIC CHEMISTRY Volume: 696 Issue: 3 Pages: 748-757 DOI: 10.1016/j.jorganchem.2010.09.073 Published: FEB 2011

Times Cited: 0 (from All Databases)

21. Title: [Effects of Bentonite on p-Methoxybenzyl Acetate: A Theoretical Model for](#)

Oligomerization via an Electrophilic-Substitution Mechanism

Author(s): Manuel Salmón, Rene Miranda, Ines Nicolás-Vázquez, Yolanda Marina Vargas-Rodríguez, **Julián Cruz-Borbolla**, María Isabel Medrano, José Antonio Morales-Serna.

Source: MOLECULES Volume: 16 Issue: 2 Pages: 1761-1775 DOI: 10.3390/molecules16021761 Published: FEB 2011

Times Cited: 2 (from All Databases)

22. Title: [A combined electrochemical and theoretical study of N,N'-bis\(benzimidazole-2-yl-ethyl\)-1,2-diaminoethane as a new corrosion inhibitor for carbon steel surface](#)

Author(s): Hernández J. Guadalupe, E. García-Ochoa, P.J. Maldonado-Rivas, **J. Cruz** and T. Pandiyan

Source: JOURNAL OF ELECTROANALYTICAL CHEMISTRY Volume: 655 Issue: 2 Pages: 164-172 DOI: 10.1016/j.jelechem.2011.01.039 Published: JUN 1 2011

Times Cited: 4 (from All Databases)

23. Title: [Theoretical Studies on Iron Surface Coating: Adsorption of Furan Derivatives Over Fe-n Clusters \(n=1-4\)](#)

Author(s): E. Montiel, N. Jayanthi, M. A. Veloz, T. Pandiyan and **J. Cruz**

Conference: 3rd International Meeting on Developments in Materials, Processes and Applications of Emerging Technologies (MPA-2009) Location: Manchester, ENGLAND Date: 2009

Source: JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY Volume: 11 Issue: 6 Pages: 5483-5490 DOI: 10.1166/jnn.2011.3440 Published: JUN 2011

Times Cited: 0 (from All Databases)

24. Title: [Fe \(n\) Clusters \(n=2-7\) Interaction with Furan Ring: DFT Studies over Iron Surface Suitability for Furan Adsorption](#)

Author(s): E. Montiel, J. Cruz, J.-C. Gonzales, N. Jayanthi, T. Pandiyan.

Source: JOURNAL OF CLUSTER SCIENCE Volume: 22 Issue: 3 Pages: 459-471 DOI: 10.1007/s10876-011-0394-2 Published: SEP 2011

Times Cited: 0 (from All Databases)

25. Title: [Absolute configuration assignment of 3-oxindolylacetyl-4-phenyloxazolidinone derivatives](#)

Author(s): Oscar R. Suárez-Castillo, Myriam Meléndez-Rodríguez, Luis E. Castelán-Duarte, Erick A. Zúñiga-Estrada, **Julián Cruz-Borbolla**, Martha S. Morales-Ríos, Pedro Joseph-Nathan.

Source: TETRAHEDRON-ASYMMETRY Volume: 22 Issue: 24 Pages: 2085-2098

DOI: 10.1016/j.tetasy.2011.11.018 Published: DEC 31 2011

Times Cited: 1 (from All Databases)

26. Title: [Study on the intramolecular transannular chalcogen-tin interactions in dithiastannecine compounds](#)

Author(s): Diego Martínez-Otero, José Guadalupe Alvarado Rodríguez, **Julián Cruz-Borbolla**, Noemí Andrade-López, Thangarasu Pandiyan, Rafael Moreno-Esparza, Marcos Flores-Alamo, Jesús Cantillo-Castillo..

Source: POLYHEDRON Volume: 33 Issue: 1 Pages: 367-377 DOI:

10.1016/j.poly.2011.11.053 Published: FEB 9 2012

Times Cited: 1 (from All Databases)

27. Title: [Structural differences in eight- and ten-membered heterocyclic tin compounds displaying transannular interactions O center dot center dot center dot Sn: An experimental and theoretical study](#)

Author(s): Diego Martínez-Otero, Benito Flores-Chávez, José G. Alvarado-Rodríguez, Noemí Andrade-López, **Julián Cruz-Borbolla**, Thangarasu Pandiyan, Vojtech Jancik, Enrique González-Jiménez, Christiaan Jardínez.

Source: POLYHEDRON Volume: 40 Issue: 1 Pages: 1-10 DOI:

10.1016/j.poly.2012.04.004 Published: JUN 19 2012

Times Cited: 0 (from All Databases)

28. Title: [Absolute configuration assignment of 3-indolylacetate esters](#)

Author(s): Rosa M. Vázquez-Arredondo, Oscar R. Suárez-Castillo, Myriam Meléndez-Rodríguez, Maricruz Sánchez-Zavala, Indira C. Cano-Escudero, Claudia I. Bautista-Hernández, **Julián Cruz-Borbolla**, Martha S. Morales-Ríos, Pedro Joseph-Nathan.

Source: TETRAHEDRON-ASYMMETRY Volume: 23 Issue: 17 Pages: 1279-1293

DOI: 10.1016/j.tetasy.2012.08.005 Published: SEP 15 2012

Times Cited: 0 (from All Databases)

29. Title: [Synthesis, Raman, X-ray diffraction, and density functional studies of antimony \(III\) heterotetracycles displaying intramolecular transannular interaction O→Sb](#)

Author(s): Edmundo Guzman-Percastegui, **Julián Cruz-Borbolla**, José G. Alvarado Rodríguez, Noemí Andrade-López, Raúl Rojas Navarrete, Thangarasu Pandiyan.
Source: *Structural Chemistry*. Volume: 24 Issue: 5 Pages: 1555-1564, DOI 10.1007/s11224-012-0173-1 Published: January **2013**.

30. DFT and electrochemical studies of *N,N',N'',N'''*-tetrakis(2-methylpyridyl)-1,4,8,11-tetraazacyclotetradecane (TMPC) as an efficient corrosion inhibitor for carbon steel surfaces in an acid medium.
E. García-Ochoa, N. Jayanthi, J. Guadalupe Hernandez, M. López-Montero, **J. Cruz**, T. Pandiyan.
Int. J. Electrochem. Sci. 8 (**2013**) 8030-8049.

31. DFT and Docking studies of rhodostreptomycins A and B, their interaction with solvate/non-solvate Ca²⁺ and Mg²⁺ ions
A. C. Jardínez, J. Cruz, I. Nicolas-Vazquez, C. A. Gonzalez, M. Cepeda, J Correa-Basurto, T. Pandiyan, R. Miranda.
J Mol Model. 19 (**2013**) 4823–4836.

32. DFT analysis: Fe₄ cluster and Fe (110) surface interaction studies with pyrrole, furan, thiophene and selenophene molecules
R.L. Camacho, E. Aquino, **J. Cruz**, J.G. Alvarado-Rodríguez, O. Olvera-Neria. N. Jayanthi, T. Pandiyan.
Structural Chemistry. 25 (**2014**) 115–126.

33. Orlistat interaction with sibutramine and carnitine. A physicochemical and theoretical study.
Inés Nicolás-Vázquez, Jaime Hinojosa Torres, Julián Cruz Borbolla, René Miranda Ruvalcaba, Juan Manuel Aceves-Hernández
Journal of Molecular Structure 1062 (**2014**) 1–12.