Braulio Víctor Rodríguez Molina

Assistant Professor

Institute of Chemistry, National Autonomous University of Mexico (UNAM)
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Research interests

Design and synthesis of organic and organometallic crystalline supramolecular materials with intramolecular motion, fluorescence, or gas sorption. Characterization by means of solid-state NMR, VT X-ray crystallography, hot-stage microscopy, and other techniques

Experience

2020 to date. Assistant Professor with Tenure. Institute of Chemistry, National Autonomous University of Mexico (UNAM), Mexico City, México

2017 - 2020. Assistant Professor. Institute of Chemistry, National Autonomous University of Mexico (UNAM), Mexico City, México

2014 - 2017. Associate Professor. Institute of Chemistry, National Autonomous University of Mexico (UNAM), Mexico City, México.

Education

2011 – 2013. Postdoctoral Assistant. Department of Chemistry and Biochemistry, University of California, Los Angeles, under the supervision of Prof. Miguel A. Garcia-Garibay

2005 – 2010. Ph.D. in Chemical Sciences. Department of Chemistry, CINVESTAV-IPN, Mexico City, México, under the supervision of Prof. Rosa Luisa Santillan

1999 – 2004. BSc in Industrial Chemistry graduated with Honors, University of Veracruz, Veracruz, México

Awards and honors

International Advisory Board **EurJOC** (**2021-2023**).

University Award 2021 (**UNAM**), Research in Natural Sciences

National Research System, Level II, (2019-2022)

Academic Performance Recognition PRIDE UNAM Level C (2019-2023)

CONACYT Postdoctoral Fellowship (2011)

Alumni (2015 - to date) 3 Postdocs, 2 Ph.D. students, 8 M.Sc. students, 17 B.Sc. students

Current group: 1 postdoc, 3 Ph.D., 5 M.Sc., 6 B.Sc.

Publications (793 citations):

Independent career (denotes corresponding author):*

60. Rodriguez-Cortes, L. A.; Hernandez, F. J.; Rodriguez, M.; Toscano, R. A.; Jimenez-Sanchez, A.; Crespo-Otero, R.; **Rodríguez-Molina, B.*** "Dual-state emission in molecular rotors with reorientable benzotriazole acceptors" ChemXriv, **2022**, under consideration

59. Rodriguez-Molina, M. Galicia-Badillo, D. Cetina-Mancilla, E.; Cardenas, J.; Olvera, L. I.; Toscano, R. A.; **Rodríguez-Molina, B.*** Zolotukhin, M G. "9-Trifluoromethylxanthenediols: Synthesis and Supramolecular Motifs" *ACS Omega*, **2022**, *7*, 13520-13528.

58. Vázquez-Matías, J. I.; Hernández-Morales, E. A.; Colin-Molina, A.; Pérez-Estrada, S.; **Rodríguez-Molina, B.*** "Synergic properties in crystals: implication of motion at the molecular level" Capítulo "*Concepts and Design of Materials Nanoarchitectonics*" Royal Society of Chemistry; 1st edition (**2022**). ISBN-10:1788018028, ISBN-13:978-1788018029.

57. Santiago-Sampedro, G. I.; Aguilar-Granda, A.; Torres-Huerta, A.; Maldonado-Dominguez, M.;* **Rodríguez-Molina, B.*** Iglesias-Arteaga, M. A.* "Self-assembly of a bile acid dimeric amphiphile: A theoretical description of the aggregation induced red-shift fluorescence" *J. Org. Chem.* **2022**, *87*, 2255–2266. **(F.I. = 4.375)**

56. Colin-Molina, A.; Arcudia, J.; Lopez-Lopez, E. R.; Jellen, M. J.; Garcia-Gonzalez, M. C; Merino, G.;* **Rodriguez-Molina, B.*** "Multicomponent Crystals with Two Fast Reorienting Constituents Over Perpendicular Noncovalent Axes" *Cryst. Growth Des.*, **2022**, 1, 673–680. **(F.I. = 4.076)**

55. Belmonte-Vazquez, J. L.; Amador-Sanchez, Y. A.; Rodriguez-Cortes, L. A.; **Rodriguez-Molina, B.*** "Dual-State Emission (DSE) in Organic Fluorophores: Design and Applications", *Chem. Mater.*, **2021**, 33, 7160-7184.

54. Rodriguez-Cortes, L. A. Navarro-Huerta, A.; **Rodriguez-Molina, B.** "One molecule to light it all: The era of dual-state emission" *Matter*, **2021**, 4, 2622-2624. **(FI = 15.56)**

53. Medina-Mercado, I.; Colin-Molina, A.; **Rodríguez-Molina, B.;** Barquera Lozada, J.; Porcel, S. "Gold-ascorbic acid catalyzed arylative carbocyclization of alkynes with aryldiazonium tetrafluoroborates" *ACS Catalysis*, **2021**, *11*, 8968-8977.

52. Vargas-Olvera, E. C.; Salas-Sanchez, F. J.; Colin-Molina, A.; Perez-Estrada, S.; **Rodriguez-Molina, B.*** Alejandre, J.* Campillo-Alvarado, G.; MacGillivray, L. R.; Hopfl, H. "Molecular Dynamics Studies of Aromatic Guests in Three Isostructural Inclusion Compounds with Molecular Boron-Nitrogen Hosts" *Cryst. Growth Des.* **2022, 22,** 1, 570–584. **(F.I. = 4.076)**

51. García-González, M. C.* Navarro-Huerta, N.; Rodríguez-Muñoz, F. C.; Vera-Alvizar, E. G. Vera Ramirez, M. V.; Rodríguez-Hernández, J.; Rodríguez, M.; **Rodríguez-Molina, B.*** "The Design of Dihalogenated TPE Monoboronate Complexes as Mechanofluorochromic Crystals" *CrystEngComm*, **2021**, *23*, 5908-5917. Invited Article

50. Rojas-León, I.; Gómez-Jaimes, G.; Montes-Tolentino, P.; Hiller, W.; Alnasr, H. **Rodríguez-Molina, B.**;

Hernández-Ahuactzi, I. F.; Beltrán, H.; Jurkschat, K.;* Höpfl, H.* "Molecular cage assembly via SnOSn bridging of di-, tri- and tetranuclear organotin tectons. Extending the spacing in double ladder structures" *Chem. Eur. J.* **2021**, 2148–2162.

49. Gómez-Jaimes, G.; Rojas León, I.; Martínez Romero, R.; Beltrán, H. I.* **Rodríguez-Molina, B.** Hiller, W.; Jurkschat, K.;* Hernández, I. F.; Höpfl, H.;* "Dinuclear organotin building blocks and their conversion into a tetranuclear macrocycle containing Sn–O–Sn linkages" *Eur. J. Inorg. Chem.*, **2021**, 22, 2148-2162

48. Flores, E.; Rivera-Avalos, E.; **Rodríguez-Molina, B.**; Frontana, C.; López, L.* de Loera, D.* "Study of Organic Radicals Generated upon Naphthoquinone-Hydantoins Reactions in Basic Aqueous Solution" *Chem. Proc.* **2021**, 3, 58**.**

47. Garcia-Gonzalez, M. C.; Espinosa-Rocha, J.; Rodriguez-Cortes, L. A.; Amador-Sanchez, Y. A.; Miranda, L. D.*; **Rodríguez-Molina, B.*** *Org. Biomol. Chem.* **2021**, *19*, 3404-3412**.**

46. Aguilar-Rodríguez, P.; Mejía-González, A.; Zetina, S.; Colin-Molina, A.; **Rodríguez-Molina, B.**; Esturau-Escofet, N.* "Unexpected behavior of commercial 1 artists' acrylic paints under UVA artificial aging" *Microchem. J.* **2021**, *160(Part_B), 105743***.**

45. Navarro-Huerta, A.; Jellen, M. J.; Arcudia, J.; Teat, S.; Toscano, R. A.; Merino, G.,* **Rodriguez-Molina, B.*** "Tailoring the cavities of hydrogen-bonded amphidynamic crystals using weak contacts: towards faster molecular machines", *Chem. Sci.*, **2021**, *12*, 2181-2188 **(F.I. = 9.346).** 44. Mayorquín-Torres, M. C., Navarro-Huerta, A., Flores-Álamo, M., **Rodríguez-Molina, B.** Iglesias-Arteaga, M. A.* "Palladium Catalyzed Generation of ortho-Quinone Methides. A Three-Component Synthesis of L-Shaped Dimeric Steroidal Scaffolds" *J. Org. Chem.* **2021**, 86, 4112-4120

44. Mayorquín-Torres, M. C., Navarro-Huerta, A., Flores-Álamo, M., **Rodríguez-Molina, B.** Iglesias-Arteaga, M. A.* "Palladium Catalyzed Generation of ortho-Quinone Methides. A Three-Component Synthesis of L-Shaped Dimeric Steroidal Scaffolds" *J. Org. Chem.* **2021**, 86, 4112-4120 **(F.I. = 4.335)**

43. Gálvez-Martínez, E.; Aguilar-Granda, A.; **Rodríguez-Molina, B.**; Haro-Pérez, C.; Kozina, A.* "Catalytic Evaluation of Citrate-stabilized Palladium Nanoparticles in the Sonogashira Reaction for Synthesis of 1,4-Bis[(trimethylsilyl)ethynyl]benzene", *Cat. Commun.*, **2021**, *153*, *106269*

42. Torres-Huerta, A., Galicia-Badillo, D., Aguilar-Granda, A., Bryant, J. Uribe-Romo, F.*; **Rodríguez-Molina, B.***, "Double rotational rates in an amphidynamic water-resistant zirconia MOF" *Chem. Sci.*, **2020**, *11*, *11579-11583.*

41. Ramos-Enriquez, M. A.; Colin-Molina, A.; Flores-Alamo, M.; **Rodríguez-Molina, B.*** Iglesias-Arteaga, M. I.* "Phase Transformations of a Conformational Solvatomorphic Steroid: [23(23E,25R]-23(28)-(3'-acetoxybenzyliden)-5a-spirostan-3β-ol acetate" *Cryst. Growth Des.* **2020**, 10, 6649–6659.

40. Vargas-Romero, K.; Martínez-Torres, F. C.; Aguilar-Granda, A.; Pérez-Estrada, S.; Flores-Alamo, M.; **Rodríguez-Molina, B.*** Iglesias-Arteaga M.* "Synthesis and Solid State Dynamics of a Crystalline Steroid Molecular Rotor Without the Alkyne Axle: Steroid Dimers Based on a 1,4-Di(1,3-dioxan-2-yl)benzene Moiety" *J. Org. Chem.*, **2020**, 85, 13, 8501–8509.

39. Colin-Molina, A.; Jellen, M.; Rodríguez-Hernández, J.; Cifuentes Quintal, M. E.; Barroso, J.; Toscano, R. A.; Merino, G.;* **Rodríguez-Molina, B.*** Hydrogen Bonded Crystalline Molecular Machines with Ultrafast Rotation and Displacive Phase Transitions" *Chem. Eur. J.* **2020**, 11727–11733. Selected as **"HOT PAPER".**

38. Colin-Molina, A.; Velazquez-Chavez, D.; Jellen, M.; Rodriguez-Cortes, L. A.; Cifuentes Quintal, M. E.; Merino, G.; **Rodríguez-Molina, B.*** "Dynamic Characterization of Crystalline Fluorophores with Conformationally Flexible Tetrahydrocarbazole Frameworks" *CrystEngComm*, **2020**, *22*, 3789-3796.

37. Prasad-Karothu, D.; Halabi, J. M.; Li, L. Colin-Molina, A.; **Rodríguez-Molina, B.**; Naumov, P.* "Global Performance Indices for Dynamic Crystals as Organic Thermal Actuators" *Advanced Materials* **2020**, 32, 1906216

36. Amador-Sánchez, Y. A.; Aguilar-Granda, A.; Flores-Cruz, R. González-Calderón, D.; Orta, C.; **Rodríguez-Molina, B.**; Jiménez-Sánchez, A.;* Miranda, L. D.* "Diversity-Oriented Synthesis of Highly Fluorescent Fused-isoquinolines for Specific Subcellular Localization" *J. Org. Chem.* **2020**, 85, 633-649.

35. Vazquez-Amaya, L. Y.; Quintero, L.; **Rodríguez-Molina, B.;** Sartillo-Piscil, F. "Transition-Metal-Free Total Synthesis and Revision of the Absolute Configuration of Pipermethystine" *J. Org. Chem.* **2020**, *85*, 5, 3949

34. Penieres-Carrillo, J. G.; Ríos-Guerra, H.; Pérez-Flores, J.; **Rodríguez-Molina, B.**; Torres-Reyes, A.; Barrera-Téllez, F.; González-Carrillo, J; Moreno-González, L.; Martínez-Zaldívar, A.; Nolasco-Fidencio, J. J.; Matus-Meza, A. S.; Luna-Mora, R. A.* "Reevaluating the synthesis of 2,5-disubstituted-1Hbenzimidazole derivatives by different green activation techniques and their biological activity as antifungal and antimicrobial inhibitor" *J. Het. Chem.* **2020**, 57, 436-455

33. Aguilar-Granda, A.; Colin-Molina, A.; Jellen, M. J.; Cifuentes-Quintal; E.; Toscano, R. A.; Merino, G.; **Rodriguez-Molina, B.*,** "Triggering the Dynamics of a Carbazole-p-[phenylene-diethynyl]-xylene Rotor through a Mechanically Induced Phase Transition" *Chem. Commun.*, **2019**, 55, 14054.

32. Colin-Molina, A.; Prasad-Karothu, D.; Jellen, M. J.; Toscano, R. A.; Garcia-Garibay, M. A.*; Naumov, P.* **Rodríguez-Molina, B.*** "Thermosalient Amphidynamic Molecular Machines: Motion at the Molecular and Macroscopic Scales" *Matter*, **2019**, 1, 1033.

31. Valdez-Garcia, R. M.; Alarcón-Manjarrez, C.; Galano, A.; **Rodríguez-Molina, B.**; Flores-Alamo, M.; Iglesias-Arteaga, M. A. *Eur. J. Org. Chem.* **2019**, *30*, 4916.

30. Colin-Molina, A.; Jellen, M. J.; Garcia-Quezada, E.; Cifuentes-Quintal, M. E.; Murillo, F.; Barroso, J.; Perez-Estrada, S.; Toscano, R. A.; Merino, G.* **Rodríguez-Molina, B.*** "Origin of the isotropic motion in crystalline molecular rotors with carbazole stators" *Chem. Sci.* **2019**, *10*, 4422.

29. Ruelas-Alvarez, G. Y.; Cardenas-Valenzuela, A. J.; Cruz-Enriquez, A.* Hoepfl, H.; Campos-Gaxiola, J. J.; Rodriguez-Rivera, M. A.; **Rodríguez-Molina, B.** "Exploration of the Luminescence Properties of Organic Phosphate Salts of 3-Quinoline- and 5-Isoquinolineboronic Acid" *Eur. J. Inorg. Chem.* **2019**, 22, 2707.

28. Pérez-Estrada, S.; **Rodríguez-Molina, B.**; Maverick, E. F.; Khan, S. I.; Garcia-Garibay, M. A. "Throwing in a Monkey Wrench to Test and Determine Geared Motion in the Dynamics of a Crystalline One-Dimensional (1D) Columnar Rotor Array" *J. Am. Chem. Soc.* **2019**, *141*, 2413.

27. Bernal, W.; Barbosa-Garcia, O.; Aguilar-Granda, Andrés; Pérez-Gutiérrez, E.; Maldonado, J. L.; Percino, M. J.; **Rodríguez-Molina, B.*** "White Organic Light Emitting Diodes based on exciplex states by using a new carbazole derivative as single emitter layer" *Dyes and Pigments*, **2019**. *163*, 754.

26. Aguilar-Granda, A.; Garcia-González, M. C.; Perez-Estrada, S.; Kozina, A., **Rodríguez-Molina, B.*** "Nanoscale Organization and Solid-State Dynamics of Carbazole-[π]-Carbazole Rotors Edged with Aliphatic Chains" *J. Phys. Chem. C*, **2018**, *122*, 27093.

25. Campillo-Alvarado, G.; Vargas-Olvera, E. C.; Hopfl, H.; Herrera-Espana, A. D.; Sanchez-Guadarrama, O.; Morales-Rojas, H.; MacGillivray, L. R.; **Rodríguez-Molina, B.**; Farfán, N., "Self-Assembly of Fluorinated

Boronic Esters and 4,4'-Bipyridine into 2:1 N→B Adducts and Inclusion of Aromatic Guest Molecules in the Solid-State - Application for the Separation of -o,-m,-p-Xylene" *Cryst. Growth Des.*, **2018**, *18*, 2726.

24. Mayorquin-Torres, M. C.; Colin-Molina, A.; Pérez-Estrada, S.; Galano, A.;* **Rodríguez-Molina, B.***; Iglesias-Arteaga, Martín A.* "Synthesis, characterization and solid state dynamic studies of a hydrogen bond-hindered steroidal molecular rotor with a flexible axis" *J. Org. Chem.* **2018**, *83*, 3768.

23. Garcia-Gonzalez, C. Aguilar-Granda, A.; Miranda, L. D.; **Rodríguez-Molina, B.*** "Synthesis of Structurally-diverse Emissive Molecular Rotors with Four-component Ugi Stators" *J. Org. Chem.* **2018,** *83*, 2570.

22. Aguilar-Granda, A.; Pérez-Estrada, S.; Sánchez-González, E.; Álvarez, J. R.; Rodríguez-Hernández, J.; Roa, A. E.; Rodríguez, M.; Ibarra, I. A.; **Rodríguez-Molina, B.*** "Transient Porosity in Conjugated Carbazole Rotors Revealed by Changes in the Intramolecular Rotation through Vapor Diffusion" *J. Am. Chem. Soc.* **2017**, 139, 7549.

21. Sánchez-Gonzalez, E.; López-Olvera, A.; Monroy, O.; Aguilar-Pliego, J.; Flores, G. J.; Islas-Jacome, A.; Rincon-Guevara, M. A.; Gónzalez-Zamora, E.; **Rodríguez-Molina, B.***; Ibarra, I. A.* *CrystEngComm*, **2017**, 19, 4142.

20. López-Olvera, A.; Sánchez-González, E.; Campos-Reales-Pineda, A.; Aguilar-Granda, A.; Ibarra, I. A.* **Rodríguez-Molina, B.*** "CO_2 capture in a carbazole-based supramolecular polyhedron structure: the significance of Cu(II) open metal sites", *Inorg. Chem. Front.* **2017**, *4*, 56. *Journal Cover.*

19. Mendoza-Espinosa, S.; Munoz-Soto, B.; **Rodriguez-Molina, B.**; Flores, L.; Castrejon; Suarez-Moreno, G.; Zamudio-Medina, A. "Synthesis and cytotoxic evaluation of bisphosphoramidates in A549 human lung adenocarcinoma cell line" *J. Chem. Pharm. Res.* **2017**, *9*, 169.

18. Colin-Molina, A.; Pérez-Estrada, S.; Roa, A. E.; Hernandez-Ortega, S.; Rodriguez, M.; Brown, S.; **Rodríguez-Molina, B.*** "Isotropic rotation in amphidynamic crystals of stacked carbazole-based rotors featuring halogen-bonded stators" *Chem. Commun.* **2016**, *52*, 12833.

17. Aguilar-Granda, A.; Pérez-Estrada, S.; Roa, A. E.; Rodriguez-Hernandez, J.; Hernandez-Ortega, S.; Rodríguez, M.; **Rodríguez-Molina, B.*** "Synthesis of a Carbazole-[pi]-carbazole Molecular Rotor with Fast Solid State Intramolecular Dynamics and Crystallization-Induced Emission" *Crystal Growth & Design*, **2016,** *16*, 3435.

16. Czajkowska-Szczykowska, D.;* Aguilar-Granda, A., Maj, J., Wilczewska, A. Z.; Witkowski, S.; Santillan, R., Garcia-Garibay, M. A.; Morzycki, J. W.; **Rodríguez-Molina, B.*** "Solid State Characterization of Bridged Steroidal Molecular Rotors: Effect of the Rotator Fluorination on their Crystallization" *Crystal Growth & Design*, **2016,** *16*, 1599.

15. Mugica, L. C.; **Rodriguez-Molina, B.**; Ramos, S.; Kozina, A., "Surface functionalization of silica particles for their efficient fluorescence and stereo selective modification" *Colloids and Surfaces, A: Physicochemical and Engineering Aspects*, **2016**, *500*, 79.

14. Arcos-Ramos, R.; **Rodríguez-Molina, B.**; Gonzalez-Rodriguez, E.; Ramirez-Montes, P. I.; Ochoa, M. E.; Santillan, R.; Farfán, N.; Garcia-Garibay, M. A.; "Crystalline Arrays of Molecular Rotors with TIPS-Trityl and Phenolic-Trityl Stators Using Phenylene, 1,2-Difluorophenylene and Pyridine Rotators." *RSC Adv.*, **2015**, *5*, 55201.

Postdoctoral work:

13. Pérez-Estrada, S.; **Rodríguez-Molina, B.**; Xiao, L.; Santillan, R.; Jimenez-Osés, G.; Houk, K. N.; Garcia-Garibay, M. A. "Thermodynamic Evaluation of Aromatic CH/π Interactions and Rotational

Entropy in a Molecular Rotor." *J. Am. Chem. Soc.*, 2015, *137*, 2175.

12. Staehle, I.; **Rodríguez-Molina, B.;** Garcia-Garibay, M. A. "Trans-keto Tautomerism in Crystalline Molecular Rotors" *Cryst. Growth Des.* **2014**, 14, 3667.

11. Xing, J. **Rodríguez-Molina, B.**; Nazarian, N.; Garcia-Garibay, M. A. "Rotation of a Bulky Triptycene in the Solid State: Towards Engineered Nanoscale Artificial Molecular Machines" *J. Am. Chem. Soc.* **2014**, *136*, 8871.

10. Torres-Huerta, A.; **Rodríguez-Molina, B.**; Höpfl, H.; Garcia-Garibay, M. A. "Synthesis and Solid State Characterization of Self-Assembled Macrocyclic Molecular Rotors of bis(Dithiocarbamate) Ligands with Diorganotin (IV)" *Organometallics*, **2014**, *33*, 354.

9. **Rodríguez-Molina, B.;** Ochoa, M. E.; Romero, Margarita; Khan, Saeed I.; Farfán, Norberto; Santillan, Rosa; Garcia-Garibay, Miguel A. "Conformational Polymorphism and Isomorphism of Molecular Rotors with Fluoroaromatic Rotators and Mestranol Stators" *Cryst. Growth & Des.* **2013**, *13*, 5107.

8. **Rodríguez-Molina, B.**; Pérez-Estrada, S.; Garcia-Garibay, M. A. "Amphidynamic Crystals of a Steroidal Bicyclo[2.2.2]octane Rotor: A High Symmetry Group that Rotates Faster than Smaller Methyl and Methoxy Groups" *J. Am. Chem. Soc.* **2013,** *135*, 10388.

7. Czajkowska-Szczykowska, D.; **Rodríguez-Molina, B.**; Magaña-Vergara, N. E.; Santillan, R.; Morzycki, J. W.; Garcia-Garibay, M. A. "Molecular gyroscopes with steroidal frameworks bridged by olefin metathesis" *J. Org. Chem.* **2012**, *77*, 9970. FEATURED ARTICLE.

6. Escalante-Sánchez, E.; **Rodríguez-Molina, B.**; Garcia-Garibay, M. A. "Synthesis and characterization of pentiptycene molecular rotors" *J. Org. Chem.* **2012**, *77*, 7428.

5. Arcos-Ramos, R.; **Rodríguez-Molina, B.;** Romero, M.; Méndez-Stivalet, J. M.; Ochoa, M. E. Ramírez-Montes, P. I.; Santillan, R.; Garcia-Garibay, M. A.; Farfán, N., "Synthesis and Evaluation of Molecular Rotors with Large and Bulky tert-Butyldiphenylsilyloxy-Substituted Trityl Stators" *J. Org. Chem.* **2012**, *77*, 6887.

Doctoral work:

4. **Rodríguez-Molina, B.;** Farfán, N.; Romero, M.; Méndez-Stivalet, J. M.; Santillan, R.; Garcia-Garibay, M. A. "Anisochronous Dynamics in a Crystalline Array of Steroidal Molecular Rotors: Evidence of Correlated Motion within 1D Helical Domains" *J. Am. Chem. Soc.*, **2011**, *133*, 7280.

3. Domínguez, O.; **Rodríguez-Molina, B.;** Rodríguez, M.; Ariza, A.; Farfán, N.; Santillan, R.; "X-ray Crystallographic and Spectroscopic Properties of Eight Schiff Bases as Evidence of the Proton Transfer Reaction. Role of the Intermolecular Hydrogen Bond" *New J. Chem.*, **2011**, *35*, 156.

2. **Rodríguez-Molina, B.;** Pozos, A.; Cruz, R.; Romero, M.; Flores, B.; Farfán, N.; Santillan, R.; Garcia-Garibay, M. A. "Synthesis and solid state characterization of molecular rotors with steroidal stators: ethisterone and norethisterone" *Org. & Biomol. Chem.* **2010**, *8*, 2993.

1. **Rodríguez-Molina, B.;** Ochoa, M. E.; Farfán, N.; Santillan, R.; Garcia-Garibay, M. A. "Synthesis, characterization, and rotational dynamics of crystalline molecular compasses with N-heterocyclic rotators" *J. Org. Chem.* **2009**, *74*, 8554

International Seminars

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1. Pacifichem 2021, December 21, **2021**. Honolulu, Hawaii, USA, Zoom
2. University of Padova, September 17, **2021**, (Zoom).
3. The University of Illinois at Chicago, USA, August 11, **2021**. Summer Seminar Series.
4. University of Colorado, Denver. Seminar Series, October 23, **2020**, Seminario Virtual via Zoom, UC Denver, Colorado, USA
5. 1st American-Mexican Symposium on Supramolecular Materials Design: From Boron to Hydrogen Bonding, University of Iowa, November 08, **2019**, Cedar Rapids, Iowa, USA.
6. Symposium: The Future of Science. The Chemistry and Materials for the 21st Century. Berkeley Global Science Institute. October 07,, **2019**, Mexico City, México.
7. XXIV International Conference on Chemistry of the Solid State (ICCOSS), June 16-21 **2019**, University of New York, New York, USA
8. 1st Atlantic Basin Conference in Chemistry, Atlantic Basin Conference January 23, **2018**, Cancún, Quintana Roo, México.
9. Materials Research Society, Crystal Engineering Symposium, April 19-21, **2015**, San Francisco, CA, USA
10. 2nd International Symposium SEMINA, September 17-19, **2013**, Hermosillo, Sonora, México

International Meetings (organizer)

1. LatinXChem, 2020 and 2021, Twitter