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**NAME:** CORREA, N. MARIANO

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N. Mariano Correa was born in Mendoza, Argentina. He received his undergraduate degree with first class honors from Universidad Nacional de Río Cuarto (UNRC). Under the guidance of Prof. Juana J. Silber, he earned the Ph.D. degree in Chemical Sciences from UNRC in 1997 where his research explored reverse micelles. Following his graduate studies, Dr. Correa performed postdoctoral research at University of Texas at Arlington, USA with Prof. Zoltan A. Schelly investigating the mechanism of liposomes electroporation. He has worked with Prof. Omar El Seoud at Universidad de Paulo, Brazil and later with Prof. Nancy E. Levinger at Colorado State University, USA with support from a Fulbright award. Presently he holds the positions of Professor and Scientific Researcher of CONICET (the National Research Council of Argentina). His research interests include a series of work lines that study intermolecular interactions-chemical recognition in supramolecular structures and organized media. The studies are pointed to comprehend the factors that determine the interaction of a solute with a particular media, and apply them to several processes. The supramolecular systems of interest are aqueous and non aqueous reverse micelles in organic solvents.

#### **PERSONAL DATA**

**Birth:** May 15, 1968

**Sex:** Male

**Marital Status:** Single.

**Languages:** fluent in Spanish and English. Read and comprehension: Portuguese and Italian.

**Birthplace:** Mendoza, Argentina.

**Citizenship:** Argentinean.

#### **EDUCATION**

High-schools in Argentina (Diploma in 1985).

1986-1991	Universidad Nacional de Rio Cuarto. Argentina. Graduate in Chemistry, 1991. Grade: <b>9.68/10.</b>
1992-1997	Doctor in Chemistry (PhD). <b>Thesis advisor:</b> Professor Dr Juana J. Silber. <b>Thesis Title:</b> "Physical Organic Chemistry Studies in Organised Media. Reversed Micelles and Microemulsions. Solvatochromism and Influence in the Rate of the Reaction".

#### POSTDOCTORAL FELLOWSHIPS

- March 1997 to June 1998. Center for Colloidal and Interfacial Dynamics. University of Texas at Arlington. **Electroporation of Unilamellar Surfactant Vesicles** (with Professor Dr. Zoltan A. SCHELLY). Arlington, Tx USA.
- July 1999 to September 1999. Instituto de Quimica de la Universidad de Sao Paulo (Brasil) (with profesor Dr. Omar El Seoud).
- July 21 2000 to August 25 2000. Instituto de Quimica de la Universidad de Sao Paulo (Brasil) (with professor Dr. Omar El Seoud). **Solubilization of protic substrates by reverse aggregates in nonaqueous solvents.**
- June 23 2002 to July 29 2002. Instituto de Quimica de la Universidad de Sao Paulo (Brasil) (with professor Dr. Omar El Seoud). **Solubilization of Protic Substrate by Aerosol-OT Reverse Aggregates in Organic Solvents as Studied by FTIR and  $^1\text{H}$ NMR.**
- September 15 2002 to January 25 2003. Dipartimento Di Chimica. Università di L'Aquila (with professor Dr. Giorgio Cerichelli). **Green Chemistry: Kinetic Investigation of the Ketones Reduction by sodium Borohydride in different Reverse Micellar Media and the Study of the Suzuki Reaction in Different Surfactant Water Solution.**
- September 2005 – december 2005. Department of Chemistry. Colorado State University Fort Collins (USA) with Prof Nancy Levinger **Dynamics of Polar Solvation in Confined Environments: Non-aqueous Polar Solvents in Reverse Micelles.** FULBRIGHT award.
- August 20, 2007 – September 20, 2007. Department of Chemistry. Colorado State University Fort Collins (USA) with Prof Nancy Levinger. **Ultra – Fast phenomena in organized systems. Practical and theoretical applications.**
- September 1, 2008 – September 21, 2008. Department of Chemistry. Colorado State University Fort Collins (USA) with Prof Nancy Levinger. **Ultra – Fast phenomena in organized systems. Practical and theoretical applications.**

#### EDUCATIONAL WORK'S EXPERIENCE.

04/92-Present	Department of Chemistry, Universidad Nacional de Rio Cuarto. ARGENTINA. <b>Professor</b> in Organic Chemistry, General Chemistry and Analytical Chemistry.
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#### POSITIONS HELD

- Full Profesor, Universidad Nacional de Rio Cuarto, ARGENTINA (Since 2019).
- Research Position (Superior Research/ Investigador Superior) at Argentinean Council of Sciences (CONICET) since June 2022.
- Associate Editor of RSC-Advances (Royal Society of Chemistry). Since May 2016.
- Chair of the Chemistry Department since 2021

#### AWARDS

- Best Student of the University.
- "**Dr. Eduardo Gros**" 2009 Award. Granted by the Sociedad Argentina de Investigación en Química Orgánica (SAIQO), to the best Organic Chemistry Scientific of Argentina. November 2009
- "**Cristina Giordano**" 2015 Award. Granted by the Asociación Argentina de Investigación Fisicoquímica (AAIFQ) to the best Physical Chemistry Scientific of Argentina. April 2015

**TOTAL PUBLICATIONS. 150 publications, references: 4237, h index: 37.**

- 1) **Micropolarity of Reverse Micelles of AOT in n-Hexane** N.M. Correa, M.A. Biasutti and J.J. Silber. *J. Colloid. Interface. Sci.*, **172**, 71-76 (1995). ISSN: 0021-9797. IP 2.233
- 2) **Micropolarity of Reverse Micelles: Comparison Between Anionic, Cationic And Neutral Reverse Micelles**. N.M. Correa, M.A. Biasutti and J.J. Silber. *J Colloid Interface Sci.* **184/2**, 570 -578, (1996). ISSN: 0021-9797. IP 2.233.
- 3) **Binding Of Nitroanilines To Reverse Micelles Of AOT-nHexane**. N. M. Correa and J.J. Silber. *J. Molec. Liquid* **.72**, 163-176 (1997). ISSN: 0167-7322, IP 1.057. Elsevier, Holanda
- 4) **Binding Of Nitrodiphenylamine To Reverse Micelle Of AOT in n-hexane and Carbon Tetrachloride. Solvent and Substituent effects**. N. M. Correa, E. N. Durantini and J. J. Silber, *J Colloid Interface Sci.*, **208**, 96 -103, (1998). ISSN: 0021-9797. IP 2.233.
- 5) **Electroporation of Unilamellar Vesicles studied by using a Pore-Mediated Electron Transfer Reaction**. N.M Correa, Z.A. Schelly. *Langmuir*. **14**, 20, 5802-5805, (1998). ISSN: 0743-7463. IP 3.902.
- 6) **Dynamics of Electroporation of Synthetic Liposomes Studied Using a Pore-mediated Reaction,  $\text{Ag}^+ + \text{Br}^- \rightarrow \text{AgBr}$** . N.M Correa, Z.A. Schelly. *J. Phys. Chem. B*, **102 (46)** , 9319-9322 (1998). ISSN: 1089-5647. IP 4.115
- 7) **Catalysis in Micellar Media. Kinetics and Mechanism of the reaction of 1-fluoro-2,4dinitrobenzene with n-Butylamine and Piperidine in n-hexane and AOT/nHexane/water Reverse Micelles**. N. M. Correa, E. N. Durantini and J. J. Silber. *J. Org. Chem.* **64**, 5757-5763, (1999). ISSN: 0022-3263. IP 3.790
- 8) **SnAr Reactions of 1-Halo-2,4-Dinitrobenzene with n-Butylamine in AOT/n-Hexane/Water reverse micellar media. Influence of The Leaving Group**. L. Boscatto, S.M. Chiacchiera, N.M. Correa, E.N. Durantini, L. Zingaretti, J.J. Silber. *Atual. Fisicoquim. Org. Brasil* **1998**. **11**, 534-552, (1999).
- 9) **Micropolarity of AOT in Aqueous and Nonaqueous Microemulsions**. N. M Correa, R.D. Falcone, M.A. Biasutti, J.J. Silber. *Atual. Fisicoquim. Org. Brasil* **1998**. **11**, 196-213, (1999).
- 10) **Preparation of AgBr quantum dots via the electroporation of Vesicles**. N.M Correa, H. Zhang, Z.A. Schelly. *J. Am. Chem. Soc.* **122:(27)**, 6432-6434, (2000). ISSN: 0002-7863. IP 7.696
- 11) **Properties of AOT Aqueous and Nonaqueous Microemulsions Sensed by Optical Molecular Probes**. R.D. Falcone, N.M. Correa, M.A. Biasutti, J.J. Silber. *Langmuir*. **16(7)**, 3070-3076 (2000). ISSN: 0743-7463. IP 3.902.
- 12) **FT-IR and  $^1\text{H}$ NMR Studies of the Solubilization of Pure and Aqueous 1,2-Ethanediol in the Reverse Aggregates of Aerosol-OT**. L.P. Novaki, N.M. Correa, J.J., Silber, O.A. ElSeoud, *Langmuir*, **16**, 5573-5578, (2000). ISSN: 0743-7463 IP 3.902
- 13) **Influence of Anionic and Cationic Reverse Micelles on Nucleophilic Aromatic Substitution Reaction Between 1-Fluoro-2,4-dinitrobenzene and Piperidine**. N.M. Correa, E.N. Durantini, J.J. Silber, *J. Org. Chem.*, **65**, 6427-6433, (2000). IP 3.790. ISSN: 0022-3263. American Chemical Soc. Washington USA.
- 14) **Reverse Micellar Catalytic Effect on SnAr Reaction of 1- Fluoro-2,4-Dinitrobenzene With Piperidine**. N.M. Correa, E.N. Durantini, J.J. Silber. *Atual. Fisicoquim. Org. Brasil* **1999**. **12**, 96-118, (2000).
- 15) **Substituent Effects on Binding Constants of Carotenoids to AOT/ n-Heptane Reverse Micelles**. N.M. Correa, E.N. Durantini, J.J. Silber. *J Colloid Interface Sci.* **240**, 573 – 580 (2001). IP 2.233. ISSN: 0021-9797. Academic Press, New York, USA
- 16) **Solubilization of Pure and Aqueous 1,2,3-Propanetriol by Reverse Aggregates of Aerosol-OT in Isooctane Probed by FTIR and  $^1\text{H}$ NMR Spectroscopy**. O. El SEoud, N.M. Correa, L.P. Novaki. *Langmuir* **17(6)**, 1847-1852, (2001). IP 3.902. ISSN: 0743-7463. American Chemical Soc. Washington USA.
- 17) **Acid-Base and Aggregation Processes of Acridine Orange in n-Heptane/AOT/water Reverse Micelles**. R.D. Falcone, N.M. Correa, M.A. Biasutti, J.J. Silber. *Langmuir* **18**, 2039-2047, (2002). IP 3.902. ISSN: 0743-7463. American Chemical Soc. Washington USA.
- 18) **Exploratory Study of the Effect of Polar Solvents upon the Partitioning of Solutes in Nonaqueous Reverse Micellar Solutions**. J.J. Silber, , R.D. Falcone, N.M. Correa M.A. Biasutti,, E. Abuin. E. Lissi, P. Campodonico. *Langmuir*. **19**, 2067 - 2071 (2003). IP 3.902. ISSN: 0743-7463. American Chemical Soc. Washington USA.
- 19) **Mild and Versatile Method for Palladium Catalyzed Cross-Coupling of Aryl Halides in Water and Surfactants**. Antonio Arcadi, Giorgio Cerichelli, Marco Chiarini, Mariano Correa, Daniel Zorzan. *Eur. J. Org. Chem.* **20**, 4080-4086 (2003). IP 2.43. ISSN:1434-193X. WILEY-VCH Verlag, Germany.
- 20) **Effect of the addition of a non-aqueous polar solvent (glycerol) on enzymatic catalysis in reverse micelles. Hydrolysis of 2-naphthyl acetate by  $\alpha$ -chymotrypsin**. R.D. Falcone, M.A. Biasutti,, N.M. Correa, J.J. Silber, E. Lissi, E. Abuin. *Langmuir* **20**, 5732-5737. (2004). IP 3.902. ISSN: 0743-7463. American Chemical Soc. Washington USA.
- 21) **Reverse Micellar Aggregates: Effect on Ketone Reduction. Part 1 Substrate Rol**. N.M. Correa, H. D. Zorzan, M. Chiarini, G. Cerichelli. *J. Org. Chem.* **69**, 8224-8230, (2004). IP 3.790. ISSN: 0022-3263. American Chemical Soc. Washington USA.

- 22) Reverse Micellar Aggregates: Effect on Ketone Reduction. Part 2: Surfactant Rol** N.M. Correa, H. D. Zorzan, L. D'Anteo, E. Lasta, M. Chiarini G. Cerichelli.. *J. Org. Chem.* 69, 8231-8238, (2004). **IP 3.790.** ISSN: 0022-3263. American Chemical Soc. Washington USA.
- 23) Characterization of Different Reverse Micelles Interfaces using The Reaction of 4-fluoro-3-nitrobenzoate with Piperidine.** . N.M. Correa, E.N. Durantini, J.J. Silber. *J. Phys. Org. Chem.* 18, 121-127 (2005). **IP 1.52.** ISSN:0894-3230. John Wiley & Sons New York , USA.
- 24) Distribution of amines in water/AOT/n-hexane reverse micelles. Influence of the amine chemical structure.** L. Zingaretti, N.M. Correa, L. Boscatto, S.M. Chiacchiera, E.N. Durantini, S.G. Bertolotti, C.R. Rivarola, J.J. Silber. *J Colloid Interface Sci.* 286, 245-252 (2005). **IP 2.233.** ISSN: 0021-9797.Academic Press, New York, USA
- 25) The Real Structure of Formamide Entrapped by AOT Non Aqueous Reverse Micelles. FT-IR and  $^1\text{H}$ NMR Studies.** N.M. Correa\*, P. A.R. Pires, J.J. Silber, O. ElSeoud. *J. Phys. Chem. B* 109, 21209-21219, (2005). **IP. 4.115.** ISSN: 1520-6106. American Chemical Soc. Washington USA.
- 26) The Use of Acridine Orange Base (AOB) as Molecular Probe to Characterize Non-aqueous AOT Reverse Micelles.** R. Darío Falcone, N. Mariano Correa, M. Alicia Biasutti, and Juana J. Silber. *J Colloid Interface Sci.* 296, 356 – 364, (2006). **IP 2.233.** ISSN: 0021-9797.Academic Press, New York, USA.
- 27). New Insights on the Behavior of Prodan in Homogeneous Media and in Large Unilamellar Vesicles.** F.Moyano, M.A. Biasutti, J.J. Silber, N.M. Correa\*. *J. Phys. Chem. B.* 110, 11838-11846, (2006) **IP. 4.115.** ISSN: 1089-5647.
- 28) What can you learn from a molecular probe?. New insights on the behavior of C343 in homogeneous Solutions and AOT reverse micelles.** N.M Correa\*, N. E. Levinger. *J. Phys. Chem. B* 110, 13050-13061 (2006). **IP. 4.115.** ISSN: 1520-6106. American Chemical Soc. Washington USA
- 29) Non-aqueous reverse micelles media for the SnAr reaction between 1-fluoro-2,4-dinitrobenzene and piperidine.** N.M. Correa, E. N. Durantini, J. J. Silber. *J. Phys. Org. Chem.* 19, 805-812 (2006). **IP 1.52.** ISSN:0894-3230. John Wiley & Sons New York , USA
- 30) When water is not water?. Exploring water confined in reverse micelles using a highly charged inorganic molecular probe.** B. Baruah, J. Roden, M. Sedgwick, N. M. Correa, D. C. Crans N. E. Levinger. *J. Am. Chem. Soc* 128, 12758- 12765. (2006) **IP 7.696.** ISSN: 0002-7863. American Chemical Soc. Washington USA
- 31) New Insights on the Photophysical Behavior of PRODAN in Anionic and Cationic Reverse Micelles. From Which State or States does it Emit?** M. Novaira, M. A. Biasutti, J. J. Silber, N. M. Correa\*. *J. Phys. Chem B* 111, 748-759 (2007). **IP. 4.115.** ISSN: 1089-5647. American Chemical Soc. Washington USA
- 32) Comparative Study of the Photophysical Behaviour of Fisetin in Homogeneous Media and in Anionic and Cationic Reverse Micelles Media.** Matías Funes, N. Mariano Correa, Juana J. Silber, M. Alicia Biasutti. *Photochem. Photobiol.* 83, 486-493, (2007). **IP 2.287.** ISSN 0031-8655. Blackwell Publishing USA.
- 33) Electrochemistry in AOT Reverse Micelles. A Powerful Technique to Characterize Organized Media.** Patricia G. Molina, Juana J. Silber, N. Mariano Correa\*, Leonides Sereno. *J. Phys. Chem C.* 111, 4269-4276 (2007). ISSN 1932-7447. American Chemical Soc. Washington USA
- 34) On the possibility that cyclodextrins chiral cavities can be available on AOT n-heptane reverse micelles. A UV-Visible and Induced Circular Dichroism Study.** F. O. Silva, J.J. Silber, R. H. de Rossi, N.M. Correa\*, M. A. Fernández. *J. Phys. Chem. B.* 111, 10703-10712, (2007). ISSN: 1520-6106. American Chemical Soc. Washington USA. **IP. 4.115**
- 35) Kinetics of reactions catalyzed by enzymes in solutions of surfactants.** M. A. Biasutti, E. A. Abuin, J. J. Silber, N. M. Correa, E. A. Lissi. Review. *Advances in Colloid and Interface Science.*136, 1-24 (2008). **IP. 3.790.** ISSN: 0001-8686. Elsevier. Amsterdam, Holanda.
- 36). On the Investigation of the Bilayer of Large Unilamellar Vesicles Using Different Cationic Hemicyanines and DPH. A Wavelength – Selective Fluorescence Approach.** F. Moyano, J. J. Silber, N. M. Correa\*. *J. Colloid Interface Sci.* 317, 332-345 (2008). **IP 2.233.** ISSN: 0021-9797. Academic Press, New York, USA
- 37) An Example of How to Use AOT Reverse Micelles Interface to Control a Photoinduced Intramolecular Charge Transfer Process.** M. Novaira, F. Moyano, M. A. Biasutti, J. J. Silber, N. M. Correa\*. *Langmuir* 24, 4637-4646. (2008). ISSN: 0743-7463. American Chemical Soc. Washington USA **IP 3.902**
- 38) Characterization of Multifunctional Reverse Micelles Interfaces Using Hemicyanines as Molecular Probes. 1: Effect of the hemicyanines' Structure.** F. Moyano, S.S. Quintana, R. D. Falcone, J. J. Silber, N. M. Correa\*. *J. Phys. Chem. B.* 113, 4284-4292 (2009) ISSN: 1520-6106. American Chemical Soc. Washington USA. **IP. 4.115.**
- 39) Characterization of Multifunctional Reverse Micelles Interfaces Using Hemicyanines as Molecular Probes. 2: Effect of the Surfactant.** S. S. Quintana, F. Moyano, R. D. Falcone, J. J. Silber, N. M. Correa\*. *J. Phys. Chem. B.* 113, 6718-6724 (2009) ISSN: 1520-6106. American Chemical Soc. Washington USA. **IP. 4.115.**

- 40) Effect of Constrained Environment on the Interaction between the Surfactant and Different Polar Solvents Encapsulated Within AOT Reverse Micelles.** A.M. Durantini, R.D. Falcone, J. J. Silber, N.M. Correa\*. *ChemPhysChem.* 10, 2034-2040 (2009). WILEY-VCH. Alemania. ISSN: 1439-4235. IP 3.502
- 41) On the Formation of New Reverse Micelles: A Comparative Study of Benzene/Surfactants/Ionic Liquids Systems Using UV-Visible Absorption Spectroscopy and Dynamic Light Scattering.** R.D. Falcone, N.M. Correa, J.J. Silber *Langmuir.* 25, 10426-10429 (2009).
- 42) What are the Factors that Control the Nonaqueous AOT Reverse Micelles Sizes? A Dynamic Light Scattering Study.** R.D. Falcone, J.J. Silber, N. M. Correa\*. *Phys Chem Chem Phys* 11, 11096-11100 (2009). Royal Society of Chemistry(RSC). Gran Bretaña. ISSN 1463-9076. IP: 4.06.
- 43). An Alternative Approach to Quantify Partition Process in Confined Environments: The Electrochemical Behavior of PRODAN in Unilamellar Vesicles.** F. Moyano, P. G. Molina, J.J. Silber, L. Sereno, N.M. Correa\*. *ChemPhysChem.* 11, 236-244 (2010). WILEY-VCH. Alemania. ISSN: 1439-4235. IP 3.502
- 44) A kinetic study of the photodynamic effect on tryptophan methyl ester and tryptophan octyl ester in DOPC vesicles.** A. Posadaz, N. M. Correa, M. A. Biasutti, N. A. Garcia. *Photochem. Photobiol.* 86, 96-103 (2010). ISSN 0031-8655. Blackwell Publishing USA. IP: 2.29.
- 45) Cationic Reverse Micelles Create Water with Super Hydrogen Bond Donor Capacity for Enzymatic Catalysis. Hydrolysis of 2-Naphthyl Acetate by  $\alpha$ -Chymotrypsin.** F. Moyano, J. C Mejuto, R. D. Falcone, J. J. Silber, N. M. Correa\*. *Chem- Eur. Journal.* 16, 8887-8893 (2010). WILEY-VCH. Alemania. ISSN: 0947-6539 IP: 5.454.
- 46) The Role of the Medium on the C343 Inter/Intramolecular Hydrogen Bond Interactions. An Absorption, Emission and  $^1\text{H}$ NMR Investigation of C343 in Benzene:n-Heptane Mixtures** J. A Gutierrez, R. D. Falcone, J. J. Silber, N. M. Correa\*. *J. Phys. Chem. A.* 114, 7326-7330 (2010). ISSN 1089-5639
- 47) Interfacial water with special electron donor properties: Effect of water–surfactant interaction in confined reversed micellar environments and its influence on the coordination chemistry of a copper complex.** Diana Blach, N. Mariano Correa, Juana J. Silber and R. Dario Falcone *J. Colloid. Int. Sci.* 355, 124-130 (2011).
- 48) Layered structure of room temperature ionic liquids in microemulsions by multinuclear NMR spectroscopic studies.** R. Dario Falcone, Bharat Baruah, Ernestas Gaidamauskas, Christopher D. Rithner, N. Mariano Correa, Juana J. Silber, Debbie C. Crans, Nancy E. Levinger. *Chem- Eur. Journal.* 17, 6837-6846, (2011).
- 49) Binding of o-nitroaniline to nonaqueous AOT reverse micelles.** R. D. Falcone, J. J. Silber, M. A. Biasutti, N. M. Correa\*. *ARKIVOK.* VII, 369-379, (2011). ISSN: 1551-7004. Arkat USA Inc. Ingles.
- 50) A New Organized Media: Glycerol:N,N-Dimethylformamide/AOT/n-Heptane Reverse Micelles. A UV-Visible Absorption, Dynamic Light Scattering and  $^1\text{H}$ NMR Investigation.** A M. Durantini, R.D. Falcone, J.J. Silber, N.M. Correa\*. *J. Phys. Chem B* 115, 5894-5902 (2011).
- 51) Electrochemistry in Large Unilamellar Vesicles. The distribution of 1-Naphthol studied by Square Wave Voltammetry.** J. S. Florez Tabares, M. L. Blas, L. E. Sereno, J J. Silber, N. M. Correa\*, P. G. Molina. *Electrochim. Acta* 56, 10231- 10237 (2011). ISSN: 0013-4686 Elsevier, Amsterdam.
- 52) Solvent Blends can Control Cationic Reversed Micellar Interdroplet Interactions. The Effect of n-Heptane:Benzene Mixture on BHDC Interfacial Properties: Droplet Sizes and Micropolarity.** F. Agazzi, R.D. Falcone, J.J. Silber, N.M. Correa\*. *J. Phys. Chem. B* 115, 12076-12084 (2011).
- 53) Inhibited Phenol Ionization in Reverse Micelles. Confinement Effect at the Nanometric Scale.** O. Fernando Silva, Mariana Fernández, Juana J. Silber, Rita H. de Rossi, N. M. Correa\*. *ChemPhysChem.* 13, 124-130. (2012).
- 54) Comparison between two Anionic Reversed Micelle Interfaces. The Role of Water-Surfactant Interactions on the Interface Properties.** S. S. Quintana, R. D. Falcone, J. J. Silber, N. M. Correa\*. *ChemPhysChem.* 13, 115-123 (2012).
- 55) The Effect of Different Interfaces and Confinement on the Structure of the Ionic Liquid 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide Entrapped in Cationic and Anionic Reverse Micelles.** D. D. Ferreyra, N. M. Correa, J. J. Silber, R. D. Falcone. *Phys. Chem. Chem. Phys.* 14, 3460-3470. (2012).
- 56) C343 Behavior in Benzene/AOT Reverse Micelles. The Role of the Dye Solubilization in the Non-polar Organic Pseudophase.** J. A. Gutierrez, R. D. Falcone, J. J. Silber, N. M. Correa\* *Dyes and Pigments* 95, 290-295 (2012). IP: 2.635. ISSN 0143-7208. Elsevier, Holanda.
- 57) Nonaqueous Polar Solvents in Reverse Micelle Systems.** N. M. Correa, J. J. Silber, R.E. Riter, N. E. Levinger. *Chem. Rev.* 112, 4569-4602 (2012) IP: 40.197. ISSN: 0009-2665. American Chemical Soc. Washington USA.
- 58) A Unique Ionic Liquid with Amphiphilic Properties that Can Form Reverse Micelles and Spontaneous Unilamellar Vesicles.** C. C. Villa, F. Moyano, M. Ceolin, J. J. Silber, R. D. Falcone\*, N. M. Correa\* *Chem- Eur. Journal.* 18, 15598-15601 (2012).

- 59) An Interesting Case where Water Behaves as a Unique Solvent. 4-Aminophthalimide Emission Profile to Monitor Aqueous Environment.** Andrés M. Durantini, R. Darío Falcone, Jorge D. Anunziata, Juana J. Silber, Elsa B. Abuin, Eduardo A. Lissi N. Mariano Correa\*. *J. Phys. Chem. B*, 117, 2160-2168 (2013).
- 60) Corrigenda to An Interesting Case where Water Behaves as a Unique Solvent. 4-Aminophthalimide Emission Profile to Monitor Aqueous Environment** Andrés M. Durantini, R. Darío Falcone, Jorge D. Anunziata, Juana J. Silber, Elsa B. Abuin, Eduardo A. Lissi N. Mariano Correa\*. *J. Phys. Chem. B* 2013, 117, 5392–5392.
- 61) "Reply to Comment on 'An Interesting Case Where Water Behaves as a Unique Solvent. 4-Aminophthalimide Emission Profile to Monitor Aqueous Environment"** Andrés M. Durantini, R. Darío Falcone, Jorge D. Anunziata, Juana J. Silber, Elsa B. Abuin, Eduardo A. Lissi N. Mariano Correa\*. *J. Phys. Chem. B* 2013, 117, 5389–5391.
- 62) PRODAN Dual Emission Feature to Monitor BHDC Interfacial Properties Changes with the External Organic Solvent Composition.** Agazzi, F., Rodriguez, J., Falcone, R. D., Silber, J. J., Correa, N.M\*. *Langmuir* 29, 3556–3566 (2013).
- 63) More Evidences on the Control of the Reverse Micelles Sizes. Combination of Different Techniques as Powerful Tool to Monitor AOT reversed Micelles Properties.** Andrés M. Durantini, R. Darío Falcone, Juana J. Silber, and N. Mariano Correa\*. *J. Phys. Chem. B* 117, 3818–3828 (2013).
- 64) Enzymatic Hydrolysis of N-Benzoyl-L-tyrosine p-nitroanilide by  $\alpha$ -Chymotrypsin in DMSO-water/AOT/n-Heptane Reverse Micelles. A Unique Interfacial Effect on the Enzymatic Activity.** Fernando Moyano, Evangelina Setien, Juana J. Silber, N. Mariano Correa\*. *Langmuir*. 29, 8245-8254 (2013).
- 65) Electron Donor Ionic Liquids entrapped in Anionic and Cationic Reverse Micelles. Effect of the Interface on the Ionic Liquid –Surfactant Interactions** Diana Blach, Juana J. Silber, N. Mariano Correa, R. Darío Falcone\*. *Phys. Chem. Chem. Phys.*, 15, 16746-16757 (2013).
- 66) On the Investigation of the Droplet-Droplet AOT Reverse Micellar Interaction upon Changing the External Solvent Composition and, its Impact on Gold Nanoparticles Synthesis.** Jorge A. Gutierrez, R. Dario Falcone, M. Arturo Lopez-Quintela, David Buceta, Juana J. Silber, N. Mariano Correa\*. European Journal of Inorganic Chemistry. 12, 2095-2102 (2014) Wiley. ISSN: 1099-0682. IP 3.12. **Seleccionado como tapa posterior del número.**
- 67) Supramolecular Assemblies Obtained by Mixing Different Cyclodextrins and AOT or BHDC Reverse Micelles.** O. Fernando Silva\*, N. Mariano Correa\*, Juana J. Silber, Rita H. de Rossi, Mariana A. Fernández. *Langmuir* 30, 3354-3362 (2014).
- 68) Probing the Microenvironment of Unimicelles Constituted of Amphiphilic hyperbranched Polyethyleneimine using 1-methyl-8-oxyquinolinium Betaine.** Agustín S. Picco,\* Gustavo F. Silvestri, R. Dario Falcone, Omar Azzaroni, Marcelo Ceolin, N. Mariano Correa\* *Phys. Chem. Chem. Phys.*, 2014, 16, 13458-13464
- 69) The Use of two Non-toxic Lipophilic Oils to Generate Environmentally Friendly Anionic Reverse Micelles without cosurfactant. Comparison with the behavior found for traditional organic non-polar solvents** V. Girardi, J.J. Silber, N.M. Correa, R.D. Falcone. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 457,354-362 (2014). Elsevier (Holanda). ISSN: 0927-7757. **IP 2,354**
- 70) How TOPO Affects the Interface of the Novel Mixed Water/AOT:TOPO/n-heptane Reverse Micelles. A Dynamic Light Scattering and Fourier Transform Infrared Spectroscopy Study.** E. Odella, R. Falcone, J.J. Silber, N.M. Correa\* *Phys. Chem. Chem. Phys.*, 2014, 16, 15457 – 15468.
- 71) Molecular Dynamics Simulation of Water/BHDC Cationic Reverse Micelles. Structural Characterization, Dynamical Properties and the Influence of the Solvent on the Intermicellar Interactions.** F. Agazzi, N.M. Correa, J. Rodriguez. *Langmuir*, 2014, 30, 9643–9653.
- 72) Effect of the cationic surfactant moiety on the structure of water entrapped in two catanionic reverse micelles created from ionic liquid-like surfactants.** C.C. Villa, J.J. Silber, N.M. Correa\*, R.D. Falcone\*. *ChemPhysChem* 2014, 15, 3097 – 3109.
- 73) Ionic Liquids entrapped in reverse micelles as nanoreactors for Sn2 reaction. Effect of the confinement on the chloride ion availability.** D. Blach, M Pessêgo, J. J. Silber, N. M Correa, L. García-Río\*, R. D. Falcone\* *Langmuir*, 2014, 30, 12130–12137.
- 74) On the Characterization of NaDEHP/n-Heptane Nonaqueous Reverse Micelles. Effect of the Polar Solvent.** S. Quintana, R. D. Falcone, J.J. Silber, N. M. Correa\*, F. Moyano\*. *Phys. Chem. Chem. Phys.* 2015, 17, 7002-7011. Doi: 10.1039/C4CP05024J
- 75) Droplet Droplet Interactions investigated using a Combination of Electrochemical and Dynamic Light Scattering Techniques. The Case of Water/BHDC/Benzene:n-Heptane System"** J.S. Florez, N. Mariano Correa, Juana J. Silber, Leonides Sereno and Patricia G. Molina, *Soft Matter* 2015, 11, 2952–2962. IP 4.151. ISSN 1744-683X. Doi 10.1039/c5sm00146c
- 76) Green Electrodes" Modified With Au Nanoparticles Synthesized in Glycerol, as Electrochemical Nitrite Sensor.** D. Gobelli, N. M. Correa, M. F. Barroso, F. Moyano, P. G. Molina *Electroanalysis*, 27, 1883-1891 (2015). ISSN 1040-0397. IP 2.502. WILEY-VCH. Alemania. Doi: 10.1002/elan.201500022

- 77) The Hydrolysis of Phenyl Trifluoroacetate in AOT/N-Heptane RMs as a Sensor of the Encapsulated Water Structure.** O. Fernando Silva, Rita H. de Rossi, N. Mariano Correa\* *RSC Advances* 2015, 5, 34878–34884. IP: 3.708 ISSN: 2046-2069. Doi: 10.1039/C5RA03532E
- 78) Singularities on the Physicochemical Properties of Spontaneous AOT-BHD Unilamellar Vesicles in Comparison with DOPC Vesicles.** C.C. Villa, N. M. Correa, J. J. Silber, F. Moyano, R. D. Falcone. *Phys. Chem. Chem. Phys.* 2015, 17, 17112-17121. Doi: 10.1039/C5CP02387D
- 79) The Impact of the polar core size and external organic media composition on the micelle-micelle interactions: The Effect on gold nanoparticles synthesis.** J. A. Gutierrez,\* M. A. Luna, N. M. Correa, J. J. Silber, and R. D. Falcone\*. *New Journal of Chemistry.* 2015, 39, 8887-8895. ISSN 1144-0546. IP: 3.086. Doi: 10.1039/C5NJ01126D.
- 80) Properties of AOT reverse micelles interfaces with different polar solvents monitored using an hemicyanine as molecular probe.** M.A. Luna, N.M. Correa, J.J. Silber, R.D. Falcone, F.M. Moyano. *J. Phys. Org. Chem.* 2016, 29 580–585. Doi 10.1002/poc.3535.
- 81) How the Cation 1-butyl-3-methylimidazolium Impacts on the Interaction between the Entrapped Water and the Reverse Micelles Interface Created with an Ionic Liquid-like Surfactant.** C.M.O. Lepori, N.M. Correa, J.J. Silber, R.D. Falcone. *Soft Matter*, 2016, 12, 830-844. Doi 10.1039/C5SM02421H
- 82) How the Type of Cosurfactant Impacts Strongly on the Size and Interfacial Composition in Gemini 12-2-12 RMs Explored by DLS, SLS and FTIR Techniques.** V.E. Cuenca, R. D. Falcone, J. J. Silber, N. M. Correa\*. *J. Phys. Chem. B*, 2016, 120, 467–476. Doi 10.1021/acs.jpcb.5b10380
- 83) A Protic Ionic Liquid, when Entrapped in Cationic Reverse Micelles, can be Used as Suitable Solvent for a Bimolecular Nucleophilic Substitution Reaction.** M. A. Crosio, N. M. Correa, J. J. Silber, R. D. Falcone. *Org. Biomol. Chem.*, 2016, 14, 3170-3177. ISSN: 1477- 0520. IP 3.56. Doi 10.1039/c5ob02664d
- 84) Electrochemical and Photophysical Behavior of 1-Naphthol in Benzyl-n-hexadecyldimethylammonium 1,4-bis (2-ethylhexyl) Sulfosuccinate Large Unilamellar Vesicles.** A. K. Cobo Solis, N. M. Correa\*, P. G. Molina\* *Phys Chem. Chem Phys.* 2016, 18, 15645-15653. Doi: 10.1039/C6CP01979J
- 85) Gold Nanoparticles Covalently Assembled onto Vesicle Structures as Possible Biosensing Platform.** M. F. Barroso, M. A. Luna, J. S. Flores Tabares, C. Delerue-Matos, N. M. Correa, F. Moyano, P.G. Molina. *Beilstein Journal of Nanotechnology*, 2016. 7, 655-663. ISSN: 2190-4286. IP:2.67. Q1. Beilstein-Institut. Frankfurt, Alemania. Doi 10.3762/bjnano.7.58
- 86) Effect of the Confinement on the Properties of Mixed Polar Solvents Sequestered. The case of Enzymatic Catalysis Performed in Nonaqueous AOT Reverse Micelle.** A. Durantini, R.D. Falcone, J.J. Silber, N.M. Correa\*. *ChemPhysChem*, 2016, 17, 1678-1685. Doi 10.1002/cphc.201501190
- 87) Determining the Substrate Permeability through the Bilayer of Large Unilamellar Vesicles of DOPC. A Kinetic Study.** M. A. Luna, J. J. Silber, L. Sereno, N. M. Correa\*, F. Moyano\* *RSC-Advances*, 2016, 6, 62594 – 62601. Doi 10.1039/C6RA12847E
- 88) Square Wave Voltammetry: An Alternative Technique to Determinate Piroxicam Release Profile from Nanostructured Lipid Carriers.** J. Otarola, M. Garrido, N. M. Correa, P. G. Molina. *ChemPhysChem*. 2016. 17, 2322-2328. Trabajo seleccionado para ser Tapa del número de la revista. Doi: 10.1002/cphc.201600226.
- 89) Nanoscale Control Over Interfacial Properties in Mixed Reverse Micelles Formulated Using Sodium 1,4-bis-2-ethylhexylsulfosuccinate and Tri-n-octyl Phosphine Oxide Surfactants** Emmanuel Odella, R. Darío Falcone, Juana J. Silber, N. Mariano Correa\*. *ChemPhysChem*. 2016, 17, 2407-2414. Doi 10.1002/cphc.201600216.
- 90) Non-aqueous Reverse Micelles Created with a Cationic Surfactant: Encapsulating Ethylene Glycol in BHDC/nonpolar solvent blends.** F.M. Agazzi, R. D. Falcone, J. J. Silber, N. M. Correa\*. *Colloids and Surfaces A* 2016, 509,467-473. Doi 10.1016/j.colsurfa.2016.09.070
- 91) On the Design of a Versatile Ionic Liquid, AOBH-DEHP, which Can Be Used As a New Molecular Probe to Investigate Supramolecular Assemblies.** Matías A. Crosio, Juana J. Silber, R. Darío Falcone, N. Mariano Correa \* *Dyes and Pigments* 2017, 138, 68-76. Doi 10.1016/j.dyepig.2016.11.031
- 92) Unique Catanionic Vesicles as a Potential “Nano-Taxi” for Drug Delivery System. In Vitro and In Vivo Biocompatibility Evaluation.** S. Stagnoli; M. A. Luna; C. C. Villa; F. Alustiza, A. Niebyski; F. Moyano; N. M. Correa\*, R. D. Falcone. *RSC Adv.*, 2017, 7, 5372–5380. Doi 10.1039/C6RA27020D
- 93) The Use of AOBH-DEHP Molecular Probe to Characterize BHDC Reverse Micelles Interfaces. Insights on the Interfacial Water Structure.** M A. Crosio, J. J. Silber, F. Moyano\*, N. M. Correa\*, R. D. Falcone. *ChemistrySelect*, 2017, 2, 2880-2887 WILEY-VCH. Alemania. ISSN: 2365-6549. Doi 10.1002/slct.201700361.
- 94) AOT Reverse Micelles as versatile reaction media for chitosan nanoparticles synthesis** M. S. Orellano, C. Porporatto, J. J. Silber, R. D. Falcone\*, N. M Correa. *Carbohydrate Polymers*. 2017, 171, 85-93. Doi 10.1016/j.carbpol.2017.04.074. ISSN: 0144-8617. Elsevier ltd. (United Kingdom).

- 95) Gold Nanoparticles Stabilized with Sulfonated Imidazolium Salts in Water and Reverse Micelles.** G. A. Monti, G.A. Fernández, N. M. Correa; R. D. Falcone, F. Moyano\*, G. F. Silvestri\*. *R. Soc. open sci.* 2017, 4, 170481 DOI: 10.1098/rsos.170481. ISSN: 2054-5703 (RSC).
- 96) Subtleties of Catanionic Surfactant Reverse Micelle Assemblies Revealed by a Fluorescent Molecular Probe.** C. C. Villa\*, J. J. Silber, R. D. Falcone\*, N. M. Correa. *Methods Appl. Fluoresc.* 2017, 5, 044001. doi.org/10.1088/2050-6120/aa7b64. IOP Publishing (United Kingdom). ISSN 2050-6120.
- 97) Improvement of the Amphiphilic Properties of a Dialkyl Phosphate by Creation of a Protic Ionic Liquid-like Surfactant.** C. M. O. Lepori, J. J. Silber, R. D. Falcone, N. M. Correa. *RSC Adv.*, 2017, 7, 44743–44750. DOI: 10.1039/c7ra08907d.
- 98) Determination of Benzyl- hexadecyldimethylammonium 1,4-bis (2-ethylhexyl) Sulfosuccinate Vesicles Permeability by Using Square Wave Voltammetry and an Enzymatic Reaction** A. K. Cobos Solis, N. M. Correa\*, P.G. Molina\* *Langmuir* 2017, 33, 12080–12086. DOI: 10.1021/acs.langmuir.7b03001
- 99) Study of Lipid Peroxidation and Ascorbic Acid Protective Role in Large Unilamellar Vesicles from a New Electrochemical Performance,** M. F. Barroso, M. A. Luna, F. Moyano, C. Delerue-Matos, N. M Correa, P. G. Molina. *Bioelectrochemistry* 2018, 120, 120-126 Elsevier (Holanda) ISSN:1567-5394. doi.org/10.1016/j.bioelechem.2017.12.003
- 100) Micropolarity and hydrogen bond donor ability of environmentally friendly anionic reverse micelles, explored by UV-visible absorption of a molecular probe and FT-IR spectroscopies.** V. G. Girardi, J. J. Silber, R. D Falcone, N. M. Correa. *Chemphyschem*, 2018, 19, 759-765. DOI: 10.1002/cphc.201701264
- 101) Spontaneous catanionic vesicles formed by the interaction between an anionic  $\beta$ -cyclodextrins derivative and a cationic surfactant.** O. F. Silva,\* R. H. de Rossi, N. M. Correa, J. J. Silber, R. D. Falcone. *RSC Adv.*, 2018, 8, 12535–12539. DOI: 10.1039/c8ra01482e
- 102) Structural characterization of biocompatibles reverse micelles using Small-Angle X-Ray Scattering,  $^{31}\text{P}$  Nuclear Magnetic Resonance and Fluorescence Spectroscopy.** E. Odella,\* R. D. Falcone, M. Ceolin, J. J. Silber, N. M. Correa\* *Journal of Physical Chemistry B*, 2018, 122, 4366–4375. DOI:10.1021/acs.jpcb.7b11395.
- 103) Characterization of a label system formed by large unilamellar vesicles for its potential use in the design of electrochemical biosensors.** M. Farías, M. A. Luna, A. M. Niebyski, N. M. Correa, P.G. Molina. *Microchemical Journal*. 2018 140, 105–113. 10.1016/j.microc.2018.04.013. Elsevier, Holanda.
- 104) Vehiculization of noscapine in large unilamellar vesicles. Study of its protective role against lipid peroxidationby electrochemical techniques.** M. A. Luna, J.A. Gutierrez, A.K. Cobo Solis, P. G. Molina, N. M. Correa. *Journal of Electroanalitical Chem.* 2019. 833, 26-32 ISSN: 1572-6657. 10.1016/j.jelechem.2018.11.015
- 105) Interfacial water properties modulated by the confinement in Re verse Micelles created by the Ionic Liquid-like surfactant bmim-AOT.** C.M. O. Lépori, N. M. Correa, J. J. Silber, F. Vaca Chávez\*, R. D. Falcone. *Soft Matter*. 2019, 15, 947-955. DOI: 10.1039/C8SM02217H
- 106) Catanionic Reverse Micelles as Optimal Microenvironment to Alter the Water Electron Donor Capacity in a SN<sub>2</sub> Reaction.** C. C. Villa, N. M. Correa, J. J. Silber, R. D. Falcone. *J. Org. Chem.* 2019, 84, 1185-1191. DOI: 10.1021/acs.joc.8b02492.
- 107) Supramolecular Systems as an Alternative for Enzymatic Degradation of 1-Naphthyl Methylcarbamate (Carbaryl) Pesticide.** E Gómez, R. D. Falcone, P. R. Beassoni, F. Moyano, N. M. Correa, *ChemSelect* 2019, 4, 7204-7210. DOI: 10.1002/slct.201901735 WILEY-VCH. Alemania. ISSN: 2365-6549.
- 108) Interfacial Dynamics and its relations with "negative" surface viscosities measured at water-air interfaces covered with a cationic surfactant.** E. Cuenca, M. Fernández Leyes, R. D. Falcone N. M. Correa, D. Langevin H. Ritacco *Langumir* 2019, 35, 8333-8343. DOI: 10.1021/acs.langmuir.9b00534
- 109) Combination of protic ionic liquid-like surfactant and biocompatible solvents to generate environmentally friendly anionic reverse micelles.** N. Dib, J. J. Silber, N. M. Correa, R. D. Falcone. *New J. Chem.* 2019, 43,10398-10404. DOI: 10.1039/c9nj02268f.
- 110) Use of ionic liquids-like surfactants for the generation of unilamellar vesicles with potential applications in biomedicine.** C. M. O. Lépori, N. M. Correa, J. J. Silber, R. D. Falcone, M. López-López, M. L. Moyá. *Langmuir* 2019, 35, 13332–1339. DOI: 10.1021/acs.langmuir.9b01197.
- 111) Gold Nanoparticle Stabilized by Sulfonated-Imidazolium Salts as Promising Catalyst in water.** G.A. Monti, N. M. Correa, R. D. Falcone, G. F. Silvestri, F. Moyano. *ChemSelect* 2019, 4, 13496-13502 . WILEY-VCH. Alemania. ISSN: 2365-6549. DOI: 10.1002/slct.201903396.
- 112) Electrochemical Methodology as an Useful Tool for the Interfacial Characterization of Aqueous Reverse Micelles** A.K. Cobo Solis, M. A. Luna, R. D. Falcone, N. M Correa\*, P. G. Molina\* *ChemistrySelect* 2019, 4, 14309– 14314. WILEY-VCH. Alemania. ISSN: 2365-6549. DOI: 10.1002/slct.201903904
- 113) Polyclonal Antibody Production Anti Pc\_312-324 peptide. Its Potential Use in Electrochemical Immunosensors for Transgenic Soybean Detection.** M. Farias, Mariela Marioni, Dario C. Ramirez, A.

Niebyski, N. Mariano Correa, P.G. Molina. *Bioelectrochemistry* 2020, 131, 107397. Elsevier (Holanda) ISSN:1567-5394.

**114) Piroxicam-Loaded nanostructured Lipid Nanocarriers Modified with Salicylic Acid: The effect on Drug Release.** J.J. Otarola, A.K. Cobo Solis, N.M. Correa, P.G. Molina. *ChemistrySelect* 2020, 5, 804-809. WILEY-VCH. Alemania. ISSN: 2365-6549. doi.org/10.1002/slct.201904227.

**115) Catanionic Nanocarriers as a Potential Vehicle for Insulin Delivery.** A. Stagnoli, L. Sosa Alderete, M.A. Luna, E. Agostini, R.D. Falcone, A.M. Niebyski, N.M. Correa. *Colloids Surf B* 2020, 188, 110759. DOI/10.1016/j.colsurfb.2019.110759.

**116) Water-soluble gold nanoparticles: Recyclable catalysts for the reduction of aromatic nitro compounds in water.** G.A. Monti, N.M. Correa, R.D. Falcone, G. Silvestri, F. Moyano. *RSC Adv.*, 2020, 10, 15065–15071. DOI: 10.1039/d0ra02131h

**117) Role of micellar interface in the synthesis of chitosan nanoparticles formulated by reverse micellar method**” by M. Soledad Orellano, Gabriel S. Longo, Carina Porporatto, N. Mariano Correa, R. Darío Falcone. *Colloids and Surfaces A*. 2020, 599 124876. DOI 10.1016/j.colsurfa.2020.124876

**118) Noscapine Loaded Nanostructured Lipid Carriers as a Potential Topical Delivery to. Bovine Mastitis Treatment.** J. Otarola, M. A. Luna, N. M. Correa, P. G. Molina. *ChemistrySelect* 2020, 5, 5922-5927. DOI:10.1002/slct.202001138. WILEY-VCH. Alemania. ISSN: 2365-6549

**119) Imim-DEHP reverse micelles investigated with two molecular probes reveals how are the interfacial properties and the coordination behavior of the surfactant.”** Nahir Dib, Juana J. Silber, N. Mariano Correa, R. Dario Falcone. *J Mol Liq* 2020, 313, 113592. DOI: 10.1016/j.molliq.2020.113592.

**120) Amphiphilic ionic liquids as sustainable components to formulate promising vesicles to be used in nanomedicine.** R. D Falcone, N. M. Correa, J. J. Silber. *Current Opinion in Green and Sustainable Chemistry* 2020, 26:100382. DOI 10.1016/j.cogsc.2020.100382

**121) Piroxicam-Loaded Nanostructured Lipid Carriers Gel: Design and Characterization by Square Wave Voltammetry.** J. Otarola, A. K. Cobo Solis, M. E. Farias, M. Garrido, N. M. Correa, P. G. Molina. *Colloids and Surface A*. 2020, 606, 125396. DOI 10.1016/j.colsurfa.2020.125396

**122) Influence of the AOT counterion chemical structure in the generation of organized systems** by Cristian M. O. Lépori, N. Mariano Correa, Juana J. Silber, R. Darío Falcone, Manuel López-López and M. Luisa Moyá. *Langmuir* 2020, 36, 10785-10793. DOI: 10.1021/acs.langmuir.0c01575.

**123) Spontaneous formation of unilamellar vesicles based on the surfactant 1-methylimidazolium bis-(2-ethylhexyl) phosphate, evaluated as a function of pH and in saline solution.** Heber E. Andrada, O. Fernando Silva, Gustavo M. Morales, N. Mariano Correa and R. Dario Falcone. *Colloids and Surface A*. 2020, 125435. DOI. 10.1016/j.colsurfa.2020.125435

**124) Understanding metallic nanoparticles stabilization in water by imidazolium salts. A complete physicochemical study.** G. A. Monti, N M Correa, R. D. Falcone, G. F. Silvestri, F. Moyano. *ChemistrySelect* 2020, 5, 11264-1171. DOI 10.1002/slct.202002869.

**125) Is it necessary for the use of fluorinated compounds to formulate reverse micelles in a supercritical fluid? Searching the best cosurfactant to create “green “ AOT reverse micelle media.** J. A. Gutierrez\*, M. L Japas, J. J. Silber, R. D Falcone, N. M Correa \* Langmuir 2021. 37, 445-453. DOI 10.1021/acs.langmuir.0c03093.

**126) Spectroscopic Characterization and General Features of Piroxicam Encapsulated in Nanostructured Lipid Carriers.** J. Otarola\*, P. G. Molina, M Garrido, N. Mariano Correa\*. *Colloids and Surface A*. 2021, 616, 126340. DOI 10.1016/j.colsurfa.2021.126340.

**127) Modified Reverse Micelle Method as Facile Way to Obtain Several Gold Nanoparticle Morphologies**” J. A. Gutierrez\*, J. J. Silber, R. D. Falcone, N. M. Correa. *Journal Molecular Liquid* 2021, 331 115709. DOI /10.1016/j.molliq.2021.115709.

**128) Biocompatible Solvents and Ionic Liquids Based Surfactants as Sustainable Components to Formulate Environmentally Friendly Organized Systems”** Nahir Dib, Cristian M. O. Lépori, N. Mariano Correa, Juana J. Silber, R. Dario Falcone, Luis García-Río. *Polymers* 2021 13, 1378. MDPI [Switzerland](#), ISSN 2073-4360. DOI doi.org/ 10.3390/polym13091378.

**129) How the External Solvent in Biocompatible Reverse Micelles Can Improve the Alkaline Phosphatase Behavior.** N. Dib, V.R. Girardi, J. J. Silber, N. M. Correa, R. D. Falcone. *Organic and Biomolecular Chemistry* 2021, 19, 4969-4977. DOI 10.1039/D0OB02371J

**130) New Insights into the Catalytic Activity and Reusability of Water-Soluble Silver Nanoparticles.** G. A. Monti, N. M. Correa, R. D. Falcone, G. F. Silvestri, F. Moyano. *ChemistrySelect*, 2021, 6, 7436-7442. doi.org/10.1002/slct.202102113.

**131) Monitoring the microenvironment inside polymeric micelles using the fluorescence probe 6-propionyl-2-dimethylaminonaphthalene (PRODAN)** M. S. Orellano, D. A Chiappetta, J. J. Silber, R. D Falcone, N.M Correa. *J. Mol. Liq.* 2021, 343, 117552. DOI doi.org/10.1016/j.molliq.2021.117552.

- 132) Deciphering Solvation Effects in Aqueous Binary Mixtures by Fluorescence Behavior of 4-aminophthalimide: The Comparison Between Ionic Liquids and Alcohols as Cosolvents.** M. A. Crosio, J.J. Silber, F.E. Moran Vieyra, R. D. Falcone, C.D. Borsarelli, N.M. Correa\*. *J. Phys. Chem. B.* 2021, 125, 13203-13211. DOI 10.1021/acs.jpcb.1c06569. Trabajo seleccionado como TAPA FRONTAL de la revista
- 133) A simple electrochemical immunosensor for sensitive detection of transgenic soybean protein CP4-EPSPS in seeds.** M. E. Farías, N. M. Correa, L. Sosa, A. M. Niebylski, P. G. Molina. *Talanta*, 2022, 237, 122910 DOI doi.org/10.1016/j.talanta.2021.122910.
- 134) Amphiphilic ionic liquids capable to formulate organized systems in an aqueous solution, designed by a combination of traditional surfactants and commercial drugs"** Nahir Dib, Juana J. Silber, N. Mariano Correa and R. Dario Falcone. *Pharmaceutical Research* 2022, 10, 2379-2390 DOI doi.org/10.1007/s11095-022-03342-7
- 135) How the type of interface can alter the behavior of an aprotic ionic liquid-water mixture entrapped in different reverse micelles. An exploratory study using an enzymatic reaction as a sensor** Diana Blach, Valeria R. Girardi, Juana J. Silber, N. Mariano Correa, R. Dario Falcone. *Colloids and Surface A* 2022, 652, 129812. DOI <https://doi.org/10.1016/j.colsurfa.2022.129812>.
- 136) Understanding the interfacial properties of bmim-AOT reverse micelles for their application as nanoreactors** Cristian M. O. Lépori, M. Soledad Orellano, N. Mariano Correa, Juana J. Silber and R. Darío Falcone *J Mol Liq* 2022, 366, 120238 <https://doi.org/10.1016/j.molliq.2022.120238>
- 137) Topical Systems for the Controlled Release of Antineoplastic Drugs: Oxidized Alginate-Gelatin Hydrogel/Unilamellar vesicles.** Soledad Stagnoli, Cintia Garro, Ozlem Ertekin, Sussane Heid, Stefan Seyferth, Gastón Soria, N. Mariano Correa, Aldo Leal-Egaña, Aldo R. Boccaccini *J Colloid. Int Sci* 2023, 629, 1066-1080. <https://doi.org/10.1016/j.jcis.2022.08.163>
- 138) Green AOT Reverse micelles as nanoreactors for Alkaline Phosphatase. The hydrogen bond "dances" between water and the enzyme, the reaction product, and the reverse micelles interface** Gustavo A. Monti, R. Darío Falcone, Fernando Moyano and N. Mariano Correa. *RSC-Advances*, 2023, 13, 1194-1202. DOI: 10.1039/d2ra06296h
- 139) PRODAN Photophysics as a Tool to Determine the Bilayer Properties of Different Unilamellar Vesicles Composed of Phospholipids.** Maria. A. Luna, Valeria R. Girardi, Maria C. Sanchez-Cerviño, Guadalupe Rivero, R. Dario Falcone, Fernando Moyano, N. Mariano Correa *Langmuir* 2024, 40, 1, 657-667 <https://doi.org/10.1021/acs.langmuir.3c02845>
- 140) Electrochemical and Spectroscopic Studies Performed for Indomethacin and 1-Naphthol Incorporated in 1-Butyl-3-methylimidazolium Bis(2-ethylhexyl) Sulfosuccinate Vesicles to Investigate Them as a Potentially pH-Sensitive Nanocarrier** Luis F. Berrio Velasco, Fernando Moyano,\* Patricia G. Molina,\* N. Mariano Correa. *Langmuir* 2024 en prensa. <https://doi.org/10.1021/acs.langmuir.3c03263>.
- 141) Electrochemical Characterization of the Encapsulation and Release of 5-Fluorouracil in Nanocarriers Formed from Soy Lecithin Vesicles** J. David Chamorro Cañon, M. Alejandra Luna, M. Carola Sabini, Patricia G. Molina, N. Mariano Correa. *J. Phys. Chem. B* 2024, 128, 5427-5436. <https://doi.org/10.1021/acs.jpcb.4c02202>.
- 142) Exploring the properties of unilamellar vesicle bilayers formed by ionic liquid surfactants for future applications in nanomedicine.** Cristian M. O. Lépori, M. Alejandra Luna, Cecilia Challier, Paola R. Beassoni, N. Mariano Correa, R. Dario Falcone. *J. Phys. Chem. B* 2024 128, 6940-6950. doi.org/10.1021/acs.jpcb.4c01906.
- 143) Alginate Nanoparticle Synthesis Using n-Heptane and Isopropyl Myristate/AOT Reverse Micelles: Impact of the Non-polar Solvent, Water Content, and pH on Particle Size and Cross-linking Efficiency.** Fanny Melina Duque, N. Mariano Correa, R. Dario Falcone. *New Journal of Chemistry* 2024, 48, 16169-16176 doi.org/10.1039/D4NJ02981J. Front Cover.
- 144) Novel Protic Ionic Liquid-Surfactant: Unraveling Enhanced Micellar Interfaces in Biocompatible Solvents.** M. Valentina Aristizabal Gil, N. Mariano Correa, R. Dario Falcone, Nahir Dib. *J. Mol. Liquid* 2024, 412, 125859. doi.org/10.1016/j.molliq.2024.125859.
- 145) Unveiling Eco-Friendly Reverse Micelle Systems: Dimethyl Carbonate as a Novel Biocompatible Solvent.** A. Gonzalez Herrera, N.M Correa, R.D Falcone, F Moyano. *ChemPhysChem*. 2024, 25, e202400617 (1 of 8). doi/10.1002/cphc.202400617.
- 146) From Enzyme Encapsulation to Environmental Solutions: Photostable Laccase in DOPC Vesicles.** M. Alejandra Luna\*, Eugenia Reynoso\*, M. Alicia Biasutti, Hernán A. Montejano, Fernando Moyano, N. Mariano Correa. *Eur J of Org Chem*. 2025, e202400807 (1 of 8), doi.org/10.1002/ejoc.202400807.
- 147) Tailoring Alginate Nanoparticles: Influence of Reverse Micelle Templates on Structure, Size, and Encapsulation Properties.** Fanny Melina Duque, R. Dario Falcone, and N. Mariano Correa, *RSC-Advances*, 2025, 15, 7926 – 7937, doi.org/10.1039/d4ra08616c.

**148) Self-Organization of Carbohydrate-Derived Amphiphilic Compounds: Insights into Their Supramolecular Assembly.** Miguel A. Tovar, R. Dario Falcone, N. Mariano Correa\*, Marcelo Ceolin, Pablo H. Dicchena, Maria Laura Uhrig\* Chem: An Eur. Journal, 2025 En prensa. doi.org/10.1002/chem.202404758.

## BOOK CHAPTERS

**5) Electro-optics and Electroporation of Synthetic Lipid Vesicles** Z A Schelly, N. Asgharian, N. M. Correa, V. Peikov, S. Wu, H. Zeng, H. Zhang in Molecular and Colloidal Electro-optics," Capitulo 12 edited by Professors S. P. Stoylov and M. Stoimenova; CRC Press, Boca Raton, FL ISBN: 0-8493-9811-8 paginas 301-306. (2006).

**6) Ionic Liquids in Soft Confinement. Effect of the Different Reverse Micelles Interfaces on the Entrapped Ionic Liquid Structure.** R. D. Falcone, N. M. Correa, N. E. Levinger, J. J. Silber Capitulo del libro *Ionic Liquid-Based Surfactant Science: Formulation, Characterization and Applications*, Eds. Bidyut K. Paul and Satya P. Moulik, John Wiley & Sons Inc., USA. 2015. Print ISBN:9781118834190.

**7) Reverse Micelles: A Versatile Platform for the Generation of Highly Controlled Polymeric Nanoparticles.** Fanny Melina Duque, N. Mariano Correa, R. Dario Falcone. *ADVANCES IN PHYSICAL ORGANIC CHEMISTRY*. 2024, en prensa. doi.org/10.1016/bs.apoc.2024.09.001 ISBN 978-0-443-19340-8

## CONGRESS AND SYMPOSIA

I have presented more than 300 communications in national and international meetings

I have been invited to give 22 Conferences in Argentina, USA, Brazil, Germany, Thailand and Colombia

## DOCTORAL STUDENTS SUPERVISED.

- 1) Dr. Rubén Dario Falcone. May 2004. (collaborator)
- 2) Dr. Fernando Moyano. November 2008 (Co-Advisor).
- 3) Dr Mercedes Novaira. March 2010. (Advisor).
- 4) Dr. Silvina Quintana. March 2012 (Advisor).
- 5) Dr. Andres Durantini. December 2013( Advisor).
- 6) Dr. Jorge Gutierrez. Function: (Advisor) March 2013.
- 7) Dr. Diana Blach Vargas. Function: (Co-Advisor). May 2014
- 8) Dr. Cristian Villa. Function: (Co-Advisor). September 2014.
- 9) Dr. Federico Agazzi. Function: (Advisor) December 2014.
- 10) Dr. Juan S. Florez. Function: Co-Advisor. April 2015.
- 11) Dr. Matias Crosio. Function: Advisor. June 2016.
- 12) Dr. Valeria Girardi. Function: Co-Advisor July 2016.
- 13) Dr. Ezequiel Cuenca. Function: Advisor. August 2016.
- 14) Dr. Emmanuel Odella. Function: Advisor. March 2017
- 15) Dr. Cristian Lepori. Function: Co-Advisor. March 2018
- 16) Dr. Jessica Otarola. Function Advisor. July 2018.
- 17) Dr. Airam Cobo Solis. Function Co-Advisor February 2019.
- 18) Dr. Soledad Stagnoli. Function: Co-Advisor in her PhD in Biology. December 2019

Nowadays I am supervising 3 doctoral students.

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