

LIST OF PUBLICATIONS, MARCH 2021

Mihail-Dumitru BARBOIU

Senior Research Scientist CNRS -Directeur de Recherche- DR1, Institut de Chimie - Section 12

Peer review publications – 309

Peer review papers 249

Peer review proceedings –30

Books and Chapters – 24

Patents-6

Invited lectures and communications -423

Invited Lectures-164

Invited Seminars – 81

Communications -111

Posters-67

The top 10 publications, as senior author

1. M. Di Vincenzo, A. Tiraferri, V.-E. Musteata, S.Chisca, R.Sougrat, L.-B. Huang, S. P. Nunes, **M. Barboiu**, Biomimetic artificial water channels membranes for enhanced desalination. *Nat. Nanotechnol.* **2021**, *16*, 190-196.
2. D. Strilets, S. Fa, A. Hardiagon, M. Baaden T. Ogoshi*, **M. Barboiu***, Biomimetic approach for highly selective artificial water channels based on tubular Pillar[5]Arene dimers* **Very Important paper**. *Angew. Chem.* **2020** DOI: 10.1002/ange.202009219; *Angew. Chem. Int. Ed.* **2020**, DOI: 10.1002/anie.202009219.
3. S.-P. Zheng, J.-J. Jiang, A. van der Lee, **M. Barboiu*** **Very Important paper and Frontispice Picture**. Voltage-responsive synthetic Cl⁻ channel regulated by pH. *Angew. Chem.* **2020**, *132*, 19802-19088; DOI: 10.1002/ange.202008393; *Angew. Chem. Int. Ed.* **2020**, *59*, 18920-18296 DOI: 10.1002/anie.202008393
4. S.-P. Zheng, Y.-H. Li, J.-J. Jiang, A. van der Lee, D. Dumitrescu M. Barboiu, Self-Assembled Columnar Triazole-Quartets - an example of synergetic H-bonding / Anion- π Channels, **Very Important paper and Cover** *Angew. Chem.* **2019**, *131*, 12165 –12170, *Angew. Chem. Int. Ed.* **2019**, *58*, 12037 –12042. <https://doi.org/10.1002/anie.201904808>
5. I. Kocsis, M. Sorci, H. Vanselous, S. Murail, S. E. Sanders, E.Licsandru, Y.-M. Legrand, A.van der Lee, M.Baaden, P. B. Petersen, G. Belfort*, **M. Barboiu***, Oriented chiral water wires in artificial transmembrane channels. *Science Adv.* **2018**, *4*, eaao5603. DOI: 10.1126/sciadv.aao5603.
6. A. Gilles, **M. Barboiu***, Highly Selective Artificial K⁺ Channels: An Example of Selectivity- Induced Transmembrane Potential. *J. Am. Chem. Soc.*, **2016**, *138*(1), 426-432.
7. E. Licsandru, I. Kocsis, Y.-x. Shen, S. Murail, Y.-M. Legrand, A. van der Lee, D. Tsai, M. Baaden, M. Kumar, **M. Barboiu***, Salt-excluding artificial water channels exhibiting enhanced dipolar water and proton translocation, *J. Am. Chem. Soc.*, **2016**, *138*, 5403-5409.
8. **M. Barboiu***, Y. Le Duc, A. Gilles, P.-A. Cazade, M. Michau, Y.-M. Legrand, A. van der Lee, B. Coasne, P. Parvizi, J. Post, T. Fyles. An artificial primitive mimic of Gramicidin-A channel, *Nature Comm.* **2014**, *5*, 4142. DOI: 10.1038/ncomms5142.
9. **M. Barboiu***, Artificial water channels, *Angew. Chem. Int. Ed.* **2012**, *51* 11674-11676.
10. Y. Le Duc, M. Michau, A. Gilles, V. Gence, Y.-M. Legrand, A. van der Lee, S. Tingry, **M. Barboiu***, Imidazole l-quartet water and proton dipolar channels, *Hot paper. Angew. Chem. Int. Ed.* **2011**, *50*(48), 11366-11372.

The top 10 review publications

1. L.-B. Huang, M. Di Vincenzo; Y. Li, **M. Barboiu***, Artificial Water Channels-towards Biomimetic Membranes for Desalination. *Chem. Eur. J.*, **2021**, *27*, 2224-2239.
2. S.-P. Zheng, L.-B. Huang, Z. Sun, **M. Barboiu*** Self-assembled Artificial Ion-Channels toward Natural Selection of Functions, *Angew. Chem.* **2021**, *133*(2), 574-606; *Angew. Chem. Int. Ed.* **2021**, *60*(2), 566-597
3. D. Su, M. Coste, A. Diaconu, **M. Barboiu***, S. Ulrich*, Cationic Dynamic Covalent Polymers for Gene Transfection, *J. Mat. Chem B.*, **2020**, *8*, 9385-9403
4. **M. Barboiu***, Encapsulation versus self-aggregation toward highly selective artificial K⁺- Channels, *Acc. Chem. Res.* **2018**, *51*, 2711–2718.
5. Y. Zhang, **M. Barboiu***, Constitutional Dynamic Materials. Toward Natural Selection of Function, *Chem. Rev.* **2016**, *116*, 809-834.
6. **M. Barboiu***, Artificial Water Channels –incipient innovative developments. *Chem. Commun.*, **2016**, *52*, 5657- 5665.
7. **M. Barboiu*** and A. Gilles, From natural to bio-assisted and biomimetic artificial water channel systems. *Acc. Chem. Res.* **2013**, *46*, 2814–2823.
8. **M. Barboiu**, M. Stadler, J.M. Lehn*, Controlled folding, motional and constitutional dynamic processes of polyheterocyclic molecular strands, *Angew. Chem.* **2016**, *128*, 4200 – 4225; *Angew. Chem. Int. Ed.* **2016**, *55*, 4130 – 4154.
9. E. Mahon, **M. Barboiu***, Synthetic multivalency for biological applications, *Org. Biomol. Chem.*, **2015**, *13*, 10590-10599.
10. **M. Barboiu***, Constitutional hybrid materials-toward selection of functions. *Eur. J. Inorg. Chem.* **2015**, 1112-1125.

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1. L.-B. Huang, A. Hardiagon, I. Kocsis, C.-A. Jegu, M. Deleanu, A. Gilles, A. van der Lee, F. Sterpone, M. Baaden, M. Barboiu,* Hydroxy Channels–Adaptive Pathways for Selective Water Cluster Permeation, *J. Am. Chem. Soc.* **2021**, <https://dx.doi.org/10.1021/jacs.0c11952>
2. H. Cui, Q. Wang, Y. Zhang, **M. Barboiu**,* Y. Zhang,* J. Chen* Double-network Heparin Dynamic Hydrogels-Dynagels as Antibacterial and 3D Cell Culture Scaffolds: *Chem. Eur. J.*, **2021** <http://dx.doi.org/10.1002/chem.202005376>
3. N. Laroui, M. Coste, D. Su, L. Ali, Y. Bessin, **M. Barboiu**, M. Gary-Bobo, N. Bettache, S. Ulrich, Cell-selective siRNA delivery using glycosylated dynamic covalent polymers self-assembled in situ by RNA-templating, *Angew. Chem.* **2021**, 133(11), 5847-5851, DOI: 10.1002/ange.202014066; *Angew. Chem. Int. Ed.* **2021**, 60(11), 5783-5787. DOI: 10.1002/anie.202014066.
4. S.-P. Zheng, L.-B. Huang, Z. Sun, **M. Barboiu*** **Frontispice Picture** Self-assembled Artificial Ion-Channels toward Natural Selection of Functions, *Angew. Chem.* **2021**, 133(2), 574-606, <https://doi.org/10.1002/ange.201915287>; *Angew. Chem. Int. Ed.* **2021**, 60(2), 566-597, <https://doi.org/10.1002/anie.201915287>.
5. R. Yu, L. Cornette de Saint-Cyr, L. Soussan, **M. Barboiu*** S. Li, Anti-bacterial dynamic hydrogels prepared from O-carboxymethyl chitosan by dual imine bond crosslinking for biomedical applications, *Int. J. Biol. Macromol.*, **2021**, 167, 1146-1155. DOI: [10.1016/j.ijbiomac.2020.11.068](https://doi.org/10.1016/j.ijbiomac.2020.11.068)
6. M. Di Vincenzo, A. Tiraferri, V.-E. Musteata, S. Chisca, R. Sougrat, L.-B. Huang, S. P. Nunes, **M. Barboiu**, Biomimetic artificial water channels membranes for enhanced desalination. *Nat. Nanotechnol.* **2021**, 16, 190-196. DOI: 10.1038/s41565-020-00796-x; <https://www.nature.com/articles/s41565-020-00796-x>
7. L.-B. Huang, M. Di Vincenzo; Y. Li, M. Barboiu, Artificial Water Channels-towards Biomimetic Membranes for Desalination. *Chem. Eur. J.*, **2021**, 27, 2224-2239. <http://dx.doi.org/10.1002/chem.202003470>.
8. D. Strilets, S. Fa, A. Hardiagon, M. Baaden T. Ogoshi*, **M. Barboiu***, Biomimetic approach for highly selective artificial water channels based on tubular Pillar[5]Arene dimers" **Very Important paper**. *Angew. Chem.* **2020** DOI: 10.1002/ange.202009219; *Angew. Chem. Int. Ed.* **2020**, 59(51), 23213-23219. DOI: 10.1002/anie.202009219.
9. D. Su, M. Coste, A. Diaconu, **M. Barboiu***, S. Ulrich*, Cationic Dynamic Covalent Polymers for Gene Transfection, *J. Mat. Chem B.*, **2020**, 8, 9385-9403 **Cover Paper**, DOI: 10.1039/d0tb01836h.
10. S.-P. Zheng, J.-J. Jiang, A. van der Lee, **M. Barboiu*** **Very Important paper and Frontispice Picture**. Voltage-responsive synthetic Cl⁻-channel regulated by pH. *Angew. Chem.* **2020**, 132, 19802-19088; DOI: 10.1002/ange.202008393; *Angew. Chem. Int. Ed.* **2020**, 59, 18920-18296 DOI: 10.1002/anie.202008393
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13. R. Yu, Y. Zhang, **M. Barboiu***, M. Maumus, D. Noël*, C. Jorgensen and S. Li*, Biobased pH-responsive and self-healing hydrogels prepared from O-carboxymethyl chitosan and a 3-dimensional dynamer as cartilage engineering scaffold. *Carbohydrate Polym.* **2020**, 116471 <https://doi.org/10.1016/j.carbpol.2020.116471>

- 14.L. Dai, W.-X. Feng, S.-P. Zheng, J.-J. Jiang, DWang, A. van der Lee, D. Dumitrescu, **M. Barboiu***, Progressive Folding and Adaptive Multivalent Recognition of Alkyl Amines and Amino Acids in p-Sulfonatocalix[4]arene Hosts: Solid-State and Solution Studies, **Cover Papper and Profile ChemPlusChem**, **2020**, 85, 1615. <https://doi.org/10.1002/cplu.202000433>.
- 15.L. Dai, W.-X. Feng, S.-P. Zheng, J.-J. Jiang, DWang, A. van der Lee, D. Dumitrescu, **M. Barboiu***, Progressive Folding and Adaptive Multivalent Recognition of Alkyl Amines and Amino Acids in p-Sulfonatocalix[4]arene Hosts: Solid-State and Solution Studies, *ChemPlusChem*, **2020**, 85, 1623-1631. <https://doi.org/10.1002/cplu.202000232>.
- 16.M. Si, W. Zhu, Y. Zhang, * **M. Barboiu***, J. Chen* Fluorodynamers displaying tunable fluorescence on constitutional exchanges in solution and at solid film-solution interface, *Chem. Eur. J*, **2020**, 26, 10191-10194. <http://dx.doi.org/10.1002/chem.202000981>
- 17.I. G. Grosu, L. Pop, M. Miclaus, N.D. Hădade, A. Terec, A. Bende, C Socaci, M. Barboiu*, I. Grosu*, Halogen bonds (N---I) at work: supramolecular catemeric architectures of 2, 7-dipyridylfluorene with ortho-, meta-or para-diiodotetrafluorobenzene isomers. *Cryst. Growth & Des.* **2020**, 20, 3429-3441. <https://doi.org/10.1021/acs.cgd.0c00205>.
- 18.E.-L. Ursu, G Gavril, S. Morariu, M. Pinteala, **M. Barboiu**, A. Rotaru* Single-Walled Carbon Nanotubes – G-quadruplex Hydrogel Nanocomposite Matrixes for Cell Support Applications *Mat. Sci. Eng. C*, **2020**, 111, 110800, <https://doi.org/10.1016/j.msec.2020.110800>
19. Y.H. Li, S. P. Zheng, D. Wang, **M. Barboiu***, Selective Proton-Mediated Transport by Electrogenic K⁺-Binding Macrocycles, *Chemistry* **2020**, 2, 11–21; DOI:10.3390/chemistry2010003
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21. Y. Zhang, **M. Barboiu***, O. Ramstrom*, J. Chen*, Surface-directed Selection of Dynamic Constitutional Frameworks as Optimized Microenvironment for Controlled Enzyme Activation. *ACS Catalysis*, **2020**, 10(2), 1423-1427. <https://doi.org/10.1021/acscatal.9b04938>
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- 23.Y. Xiong, Y.-Z Fan, Z.W. Wei, C.X. Chen, S. Chen, D. Wang, **M. Barboiu**, J.-J. Jiang, Cheng-Yong Su, Unusual Adsorption Behaviours and Responsive Structural Dynamics via selective Gate Effects of an Hourglass Porous Metal-Organic Framework, *RSC Adv.*, **2019**, 9, 37222–37231. DOI: 10.1039/c9ra07301a
- 24.Y Zhang, **M. Barboiu***, Ligand mediated metal cations exchanges within metallo-dynameric solid films, *ChemistryOpen*, **2019**, 8, 1345–1349. <http://dx.doi.org/10.1002/open.201900294>
- 25.Y. Xie, M. Chen, M. Cai, J. Teng, H. Huang, Y. Fan, **M. Barboiu**, D. Wang, C.Y. Su Hollow Cobalt Phosphide with N-Doped Carbon Skeleton as Bifunctional Electrocatalyst for Overall Water Splitting, *Inorg. Chem*, **2019**, 58, 21, 14652-14659. <https://doi.org/10.1021/acs.inorgchem.9b02333>
- 26.**M. Barboiu***, Le filet « chiral » d'eau dans des canaux transmembranaires: un procédé de dessalement!, *Actualite Chimique*, **2019**, 444-445, 121-122.
- 27.F. Dumitru, A. van der Lee, **M. Barboiu***, Chiral superstructures from homochiral Zn²⁺, Co²⁺, Fe²⁺-2,6-bis (arylethylimine)pyridine complexes, *Chirality*, **2019**, 31, 763-775. <https://doi.org/10.1002/chir.23115>

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- 29.S.-P. Zheng, Y.-H. Li, J.-J. Jiang, A. van der Lee, D. Dumitrescu **M. Barboiu***, Self-Assembled Columnar Triazole-Quartets - an example of synergetic H-bonding / Anion- π Channels, **Very Important paper and Cover Picture**. *Angew. Chem.* **2019**, 131, 12165–12170, *Angew. Chem. Int. Ed.* **2019**, 58, 12037–12042. <https://doi.org/10.1002/anie.201904808>, <https://doi.org/10.1002/ange.201904808>
- 30.J. García-Calvo, T. Torroba, V. Brañas-Fresnillo, G. Perdomo, I. Cózar-Castellano, Y.-H. Li,[†]Y.-M. Legrand, **M. Barboiu***, Manipulation of transmembrane transport by synthetic K⁺ ionophore depsipeptides and its implications in glucose-stimulated insulin secretion in β -cells. *Chem. Eur. J.* **2019**, 25, 9287–9294. <https://doi.org/10.1002/chem.201901372>
31. **M. Barboiu***, M. Kumar, M. Baaden, P.A. Gale and B. J. Hinds, *Chem. Commun.* **2019**, 55, 3853-3858. DOI:10.1039/C9CC90112D.
- 32.**M. Barboiu***, Encapsulation versus self-aggregation toward highly selective artificial K⁺-Channels, *Acc. Chem. Res.* **2018**, 51, 2711–2718. DOI:10.1021/acs.accounts.8b00311.
- 33.M. Baaden, M. Barboiu, R. Bill, S. Casanova, C.-L. Chen, M. Conner, V. Freger, B. Gong, A. Gora, B. Hinds, A. Horner, G. Hummer, M. Kumar, M. Lokesh, S. Mitra, A. Noy, P. Pohl, A. Sadet, M. Sansom, S. Tornroth-Horsefield, H.Vashisth, Structure and function of natural proteins for water transport: general discussion. *Faraday Discuss*, **2018**, 209, 83-95. DOI:10.1039/c8fd90019a.
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- 37.W. Feng, L. Dai, S.-P. Zheng, A. van der Lee, C.-Y. Su, **M. Barboiu*** "Calix[4]-box" cages promote the formation of amide bond in water in the absence of coupling reagents, *Chem. Commun.* **2018**, 54, 9738 – 9740. DOI: 10.1039/C8CC04561E
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48. **M. Barboiu***, **Keynote Lecture**, From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, China-Europe Conference on Research and Application of Membrane, **2015**. 19-21 October **2015**, Weihai, China.
49. **M. Barboiu***, **Invited Lecture**, Self-assembled supramolecular channels - toward hybrid materials for directional translocation, 2nd Korea France Joint Workshop, 2015, NanoBioMaterials Laboratory, Yonsei University, WonJu, Korea. 16-18 October **2015**.
50. **M. Barboiu***, **Keynote Lecture**, From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, Euromembrane **2015**, 06-10 September **2015**, Aachen, Germany.
51. **M. Barboiu***, **Invited Lecture**, Rubbery Organic Frameworks-ROFs-Tuning the gas-diffusion through dynamic membranes. Constitutional Dynamic Systems Symposium, 27-28/07/**2015**, Montpellier, France
52. **M. Barboiu***, **Invited Lecture**, Artificial water Channels, Assises Franco Polonaises de Chimie, Academie Polonaise des sciences à Paris, 23-24/07/**2015**, Paris France.
53. **M. Barboiu***, **Keynote Lecture**, Molecular encapsulation of dynamic systems inside the crystalline cages. 10th International Symposium on Macrocyclic & Supramolecular Chemistry (ISMCS-10). 28 June-2 July 2015, Strasbourg, France.

54. **M. Barboiu***, **Keynote Lecture**, Rubbery Organic Frameworks-ROFs-Tuning the gaz-diffusion through dynameric membranes. , North American Membrane Society NAMS-2015 meeting 30 May -3 June, **2015**, Boston, USA.
55. **M. Barboiu***, **Plenary lecture**, Water a Molecule for life, Academy Lectures, Romanian Academy-Iasi Section, 13 Mars **2015**.
56. **M. Barboiu***, **Plenary lecture**, From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, Academy Lectures, Romanian Academy, Magna Aula, 10 Mars **2015**.
57. **M. Barboiu***, **Invited lecture**, From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, ECI conferences on Anvanced Membranes Technology VI: Water Energy and New Frontiers, Siracusa, Sicily, Italy, 8-13 February, **2015**.
58. **M. Barboiu***, **Plenary Lecture**, Molecular encapsulation of dynamic systems inside the crystalline cages, Journées Bibliographiques de l'Ecole Doctorale Chimie Moleculaire 2015, University Paris VI Sorbonne, 03 February **2015**.
59. **M. Barboiu***, **Invited Lecture**, From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, 3rd IDA R&D Workshop – Emerging Technologies for Desalination: Advances in New Materials and Systems, Singapore, 8-9 December 2014.
60. **M. Barboiu***, **Invited Lecture**, Self-assembled supramolecular channels - toward hybrid materials for directional translocation. 3rd International Symposium on Hybrid Materials and Processes, HYMAP 2014, Busan, Korea, 10-13 November **2014**.
61. **M. Barboiu***, **Invited Lecture**, Constitutional G-quadruplex self-assembly toward functional supramolecular materials, Korea France Joint Workshop, 2014, NanoBioMaterials Laboratory, Yonsei University, WonJu, Korea. 17-18 October **2014**.
62. **M. Barboiu***, **Keynote Lecture**, Selection and recognition with constitutional multivalent systems, Zhijiang Science Forum-International Forum of Biomedical Materials: Nanobiomaterials and Biomaterials Interfaces (IFBM2014)", October 28-31, **2014**, at Zhejiang University, Hangzhou, China.
63. **M. Barboiu***, **Keynote Lecture**, From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, **2014** EMS Summer School, 27 September-03 October **2014**, Cetraro, Italy.
64. **M. Barboiu***, **Invited Lecture**, Artificial Water Channel Systems, Colloque Franco-Roumain de Chimie Appliquée-COFRROCA **2014**, Montpellier, France, 15-17 September, **2014**.
65. **M. Barboiu***, **Keynote Lecture**, Rubbery Organic Frameworks-ROFs-Tuning the gaz-diffusion through dynameric membranes, 10th International Congress on Membranes and Membrane porcesses, ICOM2014, 20-25 July, **2014**, Shouzhou, China.
66. **M. Barboiu***, **Keynote Lecture**, Self-assembled supramolecular channels - toward hybrid materials for directional translocation, 13th International Conference on Inorganic Membranes ICIM2014, 6-9 July, **2014**, Brisbane, Australia.
67. **M. Barboiu***, **Keynote Lecture**, Dynamic behaviours and stabilization under confinement within supramolecular cages. 9th International Symposium on Macrocyclic & Supramolecular Chemistry (ISMSC-9). 7-11 June 2014, Shanghai, China.
68. **M. Barboiu***, **Keynote Lecture**, From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, 2014 Biomimetics & Biomimicry Workshop: Applications for Desalination, 31 May **2014**, Singapore.
69. **M. Barboiu***, **Keynote Lecture**, Dynamic lectin-recognition of multivalent glyconanoplatfoms "DYNAMIC NANO- AND GLYCO-SCIENCES" SPRING TRAINING SCHOOL - COST/DYNANO, 7-9- April **2014**, Namur, Belgium.

70. **M. Barboiu*, Invited Lecture**, Dynamic Constitutional Chemistry of Carbonic Anhydrase Inhibitors. 2nd Carbonic Anhydrase Satellite meeting, October 23-25, **2013**, Napoli, Italy.
71. **M. Barboiu*, Plenary Lecture**, Dynamic Interactive Systems-toward natural selection of functions, International Graduate School GRK532 Symposium, Physical Methods for the Structural Investigation of the New Materials CDFa-03-05, Nancy, 10-11-October **2013**.
72. **M. Barboiu***, A.Gilles, Y.M. Legrand, B. Coasne T. Fyles, **Invited Lecture**, Biomimetic Artificial Water and Ion Channel Systems, MEMBRANES FOR LIQUID SEPARATION AND WATER TREATMENT: ENVIRONMENTAL APPLICATIONS AND FUTURE PERSPECTIVES SYMPOSIUM, Torino, 10-11 October **2013**.
73. **M. Barboiu*, Invited Lecture**, DYNANO network, DYNANO-GLYCOPHARM Summer School, September30-October 2 **2013**, Biological Research Centre, CSIC, Madrid, Spain.
74. **M. Barboiu*, Invited Lecture**, Artificial Water Channels, Future Membranes and membrane Processes Symposium, Sponsored by WCU Program Department of Energy Engineering, Hanyang University, 19 August **2013**, Seoul, Korea.
75. **M. Barboiu***, Rubbery Organic Frameworks-ROFs-Tuning the gaz-diffusion through dynameric membranes, **Invited Lecture**, World Congress on Chemical Engineering WCCE-2013 18-22 August, **2013**, Seoul, Korea.
76. **M. Barboiu*, Invited Lecture**, Water in confined media, water channels, 1^{ere} ECOLE PRATIQUE D'ETE LABEX CHEMISYST – POLE CHIMIE BALARD, 1-6 juillet **2013**, Ales, France
77. **M. Barboiu***, Y. Le Duc, A. Gilles, P. A. Cazade, M. Michau, Y. M. Legrand, A. van der Lee, B. Coasne, J. Post, T. Fyles, Artificial water channels: a primitive mimic of Gramicidin-A channel, **Invited Lecture**, North American Membrane Society NAMS-2013 meeting 10-13 June, **2013**, Boise, USA.
78. G. Nasr, T. Macron, **M. Barboiu***, Rubbery Organic Frameworks-ROFs-Tuning the gaz-diffusion through dynameric membranes, **Invited Lecture**, North American Membrane Society NAMS-2013 meeting 10-13 June, **2013**, Boise, USA.
79. **M. Barboiu***, Dynamic Constitutional Chemistry of Carbonic Anhydrase Inhibitors. Carbonic Anhydrase Frontiers Symposium, April 18-20, **2013**, Montecatini Terme, Italy.
80. **M. Barboiu*, Invited Lecture**, Dynamic Interactive Systems-toward natural selection of functions, Membrane Material Platforms and Concepts for Energy, Environment, and Medical Applications, 2012 MRS Fall meeting, November 25-30, **2012**, Hynes Convention Center - Boston, Massachusetts
81. **M. Barboiu*, Invited Lecture**, Dynamic Interactive Systems-toward natural selection of functions, “French American Innovation Day seminar (FAID 2012), MIT, Bartos Theater, 29-30 November **2012** in Cambridge, Massachusetts
82. **M. Barboiu*, Plenary Lecture**, Dynamic Interactive Systems-toward natural selection of functions, “*Supramolecular Symposium: Dynamics and Adaptation*”, 4-6 November **2012**, Hangzhou, China.
83. **M. Barboiu*, Invited Lecture**, G4-interactive systems and materials, “Conformational diversity and applications of G-quadruplexes“Hotel Antemare SPA, Sitges (Barcelona, Spain) from 6-8 th October **2012**.
84. **M. Barboiu*, Plenary Lecture**, Dynamic Interactive Systems-toward natural selection of functions 32nd *Romanian Chemistry Conference, Calimanesti-Caciulata, Roumanie, 3-2 octobre 2012*.

85. **M. Barboiu***, **Invited Lecture**, Imidazole Quartet - I4 -Water and Proton Dipolar Channels, Joint EMS-NAMS session, Euromembrane-2012 23-27 September, **2012**, London, UK.
86. **M. Barboiu***, **Invited Lecture**, Dynamique de structuration de l'eau en milieu confiné, 1^{ère} ECOLE PRATIQUE D'ETE LABEX CHEMISYST – POLE CHIMIE BALARD, 10-15 septembre **2012**, Montpellier/Saint-Martin de Londres, France.
87. **M. Barboiu*** on behalf of Prof. Cot, **Invited Lecture** Inorganic Membranes 20 years after, Honorary session: Founding fathers of inorganic membranes, International Conference on Inorganic membranes- ICIM2012, 9-13 July, 2012, Enschede , the Netherlands.
88. **M. Barboiu***, **Plenary Lecture** Dynamic Interactive Systems-toward natural selection of functions, Colloque Franco-Roumain de Chimie appliquée-COFROCA 2012, Bacau, Romania, 27-29 June, **2012**.
89. **M. Barboiu***, **Invited Lecture**, Adaptive Responsive Membranes, Concepts and applications of stimuli responsive membranes, Summer Workshop, 20-22 June **2012**, San Sebastian, Spain.
90. **M. Barboiu***, T. Macron and G. Nasr, **Invited Lecture**, Dynameric Membranes for Gas Separation: Achieving the Molecular Limit of Constitutional Gaz-Dynamer Interactions, North American Membrane Society NAMS-2012 meeting 10-13 June, **2012**, New Orleans, USA.
91. Y.-M. Legrand, Y. Le Duc, M. Michau, A. Gilles, A. van der Lee, S. Tingry, **M. Barboiu***, **Invited Lecture**, Imidazole Quartet - I4 - Forming Water and Proton Dipolar Channels, North American Membrane Society NAMS-2012 meeting 10-13 June, **2012**, New Orleans, USA.
92. **M. Barboiu***, **Invited Lecture**, Constitutional dynamic multivalent biomimetic systems, Rencontres en Chimie Organique Biologique, RECOB14, Aussois, 18-22 March **2012**.
93. **M. Barboiu***, **Invited Lecture**, Water and Chemistry toward life, Olympiades Regionales des Chimie 2012, 14 Mars 2012, Lycee Mermoz Montpellier.
94. **M. Barboiu**, **Plenary Lecture**, Dynamic Interactive Systems-toward natural selection of functions, Symposium "Open Problems in Systems Chemistry", Montpellier, 23-25 January **2012**.
95. P. Tyagi, A. Deratani, D. Bouyer, D. Cot, **M. Barboiu***, T.N.T. Phan, D. Bertin, D. Gigue, D. Quémener, **Invited Lecture**, Dynamic interactive materials - toward self-instructed membranes with pressure-driven tunable porosity and self-healing ability, Symposium "Open Problems in Systems Chemistry", Montpellier, 23-25 January **2012**.
96. **M. Barboiu***, **Invited lecture**, Dynamic Interactive Systems-toward natural selection of functions, RSC Macrocyclic and Supramolecular Chemistry Meeting-MASC11 **2011**, University of Bath, Great Britain, 19-20 December **2011**.
97. **M. Barboiu***, **Invited lecture**, Dynamic Interactive Systems-toward natural selection of functions, Cost Conference on Systems Chemistry, Strasbourg, France, 15-17 December **2011**.
98. **M. Barboiu***, **Invited Lecture**, Dynamic Interactive Systems-toward natural selection of functions, Minisymposium on Mass Transport through Nanocomposite Membranes , FTC (Fusion Technology Center) Hanyang University, Seoul, Korea, 31 october **2011**.
99. **M. Barboiu***, **Invited lecture**, Biomimetic Constitutional Membranes –toward self-selection of functions 2nd International Symposium on Hybrid Materials and Processes, HYMAP 2011, Busan, Korea, 27-29 October **2011**.
100. **M. Barboiu***, **Invited Lecture**, Dynamic Interactive Systems-toward natural selection of functions, Action Nationale du CNRS: De la nécessité d'une recherche exploratoire des nouvelles phases et d'edifices nouveaux, Bordeaux, 5,6 October **2011**.

101. **M. Barboiu***, **Keynote lecture**, Constitutional amplification in lectin/carbohydrate and inhibitor/carbonic anhydrase multivalent platforms, 22nd French-Japanese Symposium, of Medicinal and Fine Chemistry, Rouen, France, 11-14 September **2011**.
102. **M Barboiu Keynote Lecture**, Systems membranes - dynamic selection in hybrid membrane systems, International Conference on Membranes, ICOM2011, Amsterdam, Netherlands, 24-29 July **2011**.
103. **M. Barboiu***, **Invited Lecture**, *Adaptive systems: underlying mechanisms and examples*, SIXTH European Practical Summer School of separation and analytical chemistry of Marcoule, France, 17-22 July, **2011**.
104. **M. Barboiu***, **Invited Lecture**, *Long range interactions as basis for systems with an emerging function*. SIXTH European Practical Summer School of separation and analytical chemistry of Marcoule, France, 17-22 July, **2011**.
105. **M. Barboiu***, **Plenary Lecture**, Dynamic Interactive Systems-toward natural selection of functions, Joint French-Japan Forum, Chemistry of Functional Organic Chemicals, Strasbourg, France 23-25 June **2011**.
106. **M. Barboiu***, **Invited Lecture**, Dynamic Interactive Systems-toward natural selection of functions, 11eme Journées scientifiques de Marcoule, ICSM Marcoule, 14-17 June **2011**
107. **M. Barboiu***, **Plenary Lecture**, Dynamic Interactive Systems - Dynamic selection in hybrid organic-inorganic constitutional networks, Les Journées Scientifiques 2011 de la Société Chimique de France Section Bretagne – Pays de la Loire, Noirmoutier, France, 6-8 June **2011**.
108. **M. Barboiu***, **Plenary Lecture**, Dynamic Interactive Systems-toward natural selection of functions, Fourth C. I. Simionescu Symposium- Frontiers in Macromolecular and Supramolecular Science, Romanian Academy, Bucharest, Romania 30 May **2011**.
109. **M. Barboiu***, **Plenary Lecture**, Dynamic Interactive Systems-toward natural selection of functions, Fourth C. I. Simionescu Symposium- Frontiers in Macromolecular and Supramolecular Science, Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania 31 May- 1 June **2011**.
110. **M. Barboiu***, **Invited Lecture**, Case studies of successful Korean-European Applications, KORRIDOR, Stimulating and Facilitating the Participation of European Researchers in Korean R&D Programs, Paris, 3 March **2011**.
111. **M. Barboiu***, **Plenary Lecture**, Self-assembled membranes for technical applications, Indian Membrane Society-European Membrane Society Meeting 2011, Anna University, Chennai, India, 10-11 February, **2011**.
112. **M. Barboiu***, **Plenary Lecture**, Dynamic Interactive Systems-toward natural selection of functions, International Conference of the Chemical Societies of the South-Eastern European Countries, 15-17 september **2010**, Bucharest Romania.
113. **M. Barboiu***, **Invited Lecture**, Cycobutadiene- enigma or reality? Romanian Academy, 21 September **2010**, Bucharest, Romania.
114. **M. Barboiu***, **Keynote Lecture**, Self-organized supramolecular ionic-channels in bilayer and polymeric membranes, North American Membrane Society NAMS-2010 meeting 17-22 July, **2010**, Washington, USA.
115. **M. Barboiu***, **Invited Lecture**, Dynamic Interactive Systems - toward an adaptive molecular control of transport performances, Gordon Research Conferences: Membranes: Materials and Processes, 25-30 July, **2010**, Colby Sawyer College, New London, USA.

116. Y.M. Legrand, A van der Lee, **M. Barboiu***, Invited Lecture, Confinement de 1,3 diméthylcyclobutadiene dans une matrice cristalline, Colloque de l'Association Française de Cristallographie, Strasbourg, France, 7-10 Juillet **2010**.
117. **M. Barboiu***, **Plenary Lecture** Systems Membranes, vers le transport constitutional adaptatif, Colloque Franco-Roumain de Chimie appliquée-COFROCA 2010, Orleans, France, 7-10 July, **2010**.
118. **M. Barboiu***, **Invited Lecture**, Systems Membranes, Dynamic selection in hybrid membrane systems, Invited Lecture, European Membrane Summer School, Bucharest, Romania, 14-19 June **2010**.
119. **M. Barboiu***, **Invited lecture**, Dynamic selection in hybrid membrane systems, E-MRS Meeting, 2010, Symposium T: Advanced hybrid materials: stakes and concepts, Strasbourg, France, 7-11 June **2010**.
120. E. Mahon, **M. Barboiu***, **Invited Lecture**, Multivalent Biomimetic Glyconanoparticles Platforms as QCM Amplifiers for Lectin-Carbohydrate Interactions, European Science Foundation Workshop , Manipulation of Biomaterials Surface by plasma processing, Iasi, Romania, 26-30 May, **2010**.
121. **M. Barboiu***, **Invited lecture**, Dynamic Interactive Nanoplatforms, KORANET, Korean Scientific cooperation Network with the European Research Area, 1-2 February, Seoul, **2010**.
122. **M. Barboiu***, **Invited Lecture**, Systems membranes – Toward Functional Constitutional Devices, International Symposium on Dynamic Chemical Biology, Nalen Conference Center, Stockholm, Sweden, 12-13 October, **2009**
123. **M. Barboiu***, **Invited Lecture**, Dynameric Membranes, Constitutional materials for CO2 separation, XXVI EMS Summer School, Membrane Technology for CO2 Separation, GKSS, 29 September- 2 October 2009, Hamburg/Ratzebourg, Germany, **2009**.
124. **M. Barboiu**, **Plenary lecture**, Dynamic constitutional materials, crystallization and sol-gel driven self-selection of functional supramolecular architectures. RICCCCE XVI, Sinaia Romania, 9-12 September **2009**.
125. **M. Barboiu***, **Invited Lecture**, Dynamic constitutional membranes, toward an adaptive facilitated transport, "Systems membranes, complex roadmaps toward functional devices, SYSMEM 2009, Montpellier, France, 5 September **2009**.
126. **M. Barboiu***, **Invited Lecture**, Constitutional G-quadruplex self-assembly toward functional supramolecular materials, ESF-FWF Conference, Self assembly of Guanosine derivatives: from biological systems to nanotechnological applications, Universitätszentrum Obergurgl, Innsbruck, Austria, 20-25 June **2009**.
127. **M. Barboiu***, **Invited Lecture**, Dynamic mesoporous hybrids for self-instructed constitutional membranes, Nanoporous Materials in Energy and Environment NAPEN 2008, Chania, Grece, 12-15 Octobre **2008**.
128. **M. Barboiu***, **Invited Lecture**, Hybrid Biomimetic Membranes...Past, present and below... HYMAP 2008, Busan, Korea, 26-30 October **2008**.
129. **M. Barboiu***, **Invited Lecture**, Constitutional Dynamic systems, Conferinta Diaspora in Cercetarea Stiintifica romaneasca, Bucharest, Romania, 26-30 september **2008**.
130. **M. Barboiu***, **Invited Lecture**, Hybrid Biomimetic Membranes...Past, present and below... E-MRS 2008, Symposium P: Advanced organic and/or inorganic functional materials, Strasbourg, France, 26-30 May **2008**.
131. **M. Barboiu***, **Invited Lecture**, Hybrid Biomimetic Membranes...Past, present and below... GDR MHOM 2008 on hybrid materials, Biarritz, France 7-9 May, **2008**.

132. **M. Barboiu***, **Invited Lecture**, Hybrid Biomimetic Membranes...Past, present and below...The IInd EURYIAS 2008, Self organization and selection in evolution of matter molecules and life, International center of Biodynamics, Bucharest, Romania, 29/04-03/05 **2008**.
133. **M. Barboiu***, **Scientific review**, Biomimetic intelligence, toward lift reconstructed-Nano level: Artificial biomimetic membranes, In Cosmetics, In-Focus conference, Amsterdam, Netherlands, 15-17 April **2008**.
134. **M. Barboiu***, **Invited Lecture**, Hybrid self-organized membranes: new strategies for promising fuel cell energy applications, Frontier technology for Energy and Environment, Seoul, Korea, 28 Mars **2008**
135. **M. BARBOIU***, **Invited Lecture**, « Beyond a water molecule...».FRENCH-SERBIAN SUMMER SCHOOL, Vrjanka Banja, *Serbie*, 7-13 October **2007**.
136. **M. BARBOIU***, **Invited Lecture**, « Supramolecular and Dynamic Adaptative Hybrid Membranes».IIIrd EURYI Awardees'Network meeting, *Helsinki*, 26-28 September **2007**.
137. **M. BARBOIU***, **Invited Lecture**, « From superstructures to functions: dynamic constitutional chemistry».RICCE XV, Honorary Symposium-Constantin LUCA, *Sinaia, Romania*, 19-22 September **2007**.
138. **M. BARBOIU***, **Invited Lecture**, « Supramolecular and Dynamic Adaptative Hybrid Membranes». MEDILS-Summer School, *Split, Croatia*, 12-18 august **2007**.
139. **M. BARBOIU***, **Invited Lecture**, « Supramolecular and Dynamic Adaptative Hybrid Membranes». *Congres SFC07 Chimie du Futur, Futur de la Chimie*, Paris, France 16-18 juillet **2007**.
140. **M. BARBOIU***, **Invited Lecture**, « Dynamic Constitutional Supramolecular Membranes». *Marie Curie Wrokshop New Materials for Membranes GKSS research Center Geesthacht*, Germany 4-6 June **2007**.
141. **M. BARBOIU***, **Invited Lecture**, « Dynamic Supramolecular Hybrid Membranes». *MRS-2007 Spring Meeting*, San-Francisco, USA, 9-13 April **2007**.
142. **M. BARBOIU***, **Invited Lecture**, « Dynamic supramolecular materials», the 1st European Young Investigator Awardees Symposium "Ist EURYIAS-2006", "Complexity and Diversity in Matter, Molecules, Life and Society", EURYIAS 2006, *European Science Foundation, Strasbourg*, 6-9 decembre 2006.
143. **M. Barboiu***, Dynamic supramolecular Devices, **Conférence plénaire**, *International Symposium of Analytical Chemistry and Environement Protection*, 20 octobre **2006**, Bucharest, Romania.
144. **M. Barboiu***, **Invited Lecture**, Hybrid Supramolecular Dynamic Membranes as selective Infromation transfer Devices, 12 reuniuon Cientifica Plenaria de Quimica Inorganica de la Real Sociedad Espanola, QIES 06, Barcelona, Spain, 10-14 septembre **2006**.
145. **M. Barboiu***, **Invited Lecture**, Molecular and supramolecular dynamics- a versatile tool for self-organization of polymeric membranes systems, Proceeding of World Polymer Congress, MACRO 2006, IUPAC Rio de Janeiro, Brazil, 15-22 July **2006**
146. **M. Barboiu***, **Invited Lecture**, Hybrid Supramolecular Dynamic Membranes, *International Conference on Biosensing and Biodynamics, From Basics to Applications*, Bucharest, Romania, May 18-21 **2006**.
147. L. Cot, **M. Barboiu***, **Invited Lecture**, New horizons in Membrane science, *International Conference on Biosensing and Biodynamics, From Basics to Applications*, Bucharest, Romania, May 18-21 **2006**.

148. **M. BARBOIU***, **Plenary Lecture**, « From Molecular Information to Hybrid Membranes, as Tools for Information Transfer Devices» *International Conference on Organic Membranes ICOM 2005, Seoul, Korea, 21-27 August, 2005.*
149. **M. BARBOIU***, **Invited Young Researcher by ESF and Nobel Foundation** *Alfred Nobel Symposium – «Energy in Cosmos and Life», Sanga Saby Conference Center and Stockholm University, Sweden, 18-22 June 2005.*
150. **M. BARBOIU***, **Plenary Lecture** « From Molecular Information to Hybrid Membranes, as Tools for Information Transfer Devices». *E-MRS-2005 Spring Meeting Strasbourg, France, 31 May-5 June 2005.*
151. **M. BARBOIU***, **Invited Lecture**, « Constitutional Dynamic Self-Amplification in the Functional Imine Systems». *CERC3-Young Chemists Workshop, European Science Foundation, Baden-Baden, Germany, 3-5 mai 2005.*
152. **M. BARBOIU***, **Plenary Lecture** « Constitutional Dynamic Libraries» *14th Romanian International Conference on Chemistry and Chemical Engineering, 22-24 Septembre 2005, Bucharest, Romania.*
153. **M. BARBOIU***, **Conférence sur invitation** « Membranes hybrides de l'information moléculaire aux dispositifs de transfert dirigé» *Colloque NanoHybrides 2 GDR-CNRS 2486 Autrans, France 6-10 juin 2005.*
154. **M. BARBOIU***, **Plenary Lecture** « Dynamic Adaptative Materials for Separation and Biomimetic Nanosystems » *National Romanian Conference, 8-12 octobre 2004, Calimanesti, Romania.*
155. **M. BARBOIU***, A. Ayral, Conférence plénière sur invitation du Président de la Roumanie et Instiut Culturel Roumain, « Research in Romania in an European Context » *International Conférence on Young Migration in Europe, Romanian Cultural Institute, Sinaia, Romania, 14-18 octobre 2004.*
156. **M. BARBOIU***, **Invited Lecture**, « Modulation of coiling/uncoiling molecular motion» *The Third Younger European Chemists Conference" ESRF Grenoble, France 26-29 August 2003.*
157. **M. BARBOIU***, **Invited Lecture**, «Membranes à transport facilité : reconnaissance moléculaire et auto-assemblage» *Colloque Franco-Roumaine Mai 2003, Montpellier, Septembre 2003 Bucarest - Programme Egide Brancusi.*
158. **M. BARBOIU*** **Invited Lecture**, « Membranes Hybrides dispositifs à trasport facilité». *Colloque NanoHybrides 1 GDR-CNRS 2486 Bordeaux, France 14-15 juin 2004.*
159. **M. BARBOIU***, **C. Guizard, Invited Lecture**, « Matériaux Hybrides : des propriétés aux applications » *Ecole d'été Galerne et Ecole Thématique" du CNRS- Carcans-Maubuisson, France 14-19 Septembre 2003.*
160. **M. BARBOIU*** **Invited Lecture**, « Membranes hybrides à transport facilité» *Colloque NanoHybrides 0 GDR-CNRS 2486 Carry le Rouet, France 2-6 juin 2003.*
161. **M. Barboiu***, **Invited Lecture**, « Nanomatériaux, applications aux technologies à membrane » *National Chemistry Conference, Calimanesti-Caciulata, Roumanie, 23-25 octobre 2002.*
162. N. Hovnanian, C. Barboiu, **M. Barboiu***, S. Cerneaux, C. Guizard, O. Villamo, M. Yan Chun Wan, "Facilitated transport membranes based on organic inorganic hybrid materials with specific solute transport properties", **Conférence plénière - 28th International Conference of the Slovak Society of Chemical Engineereing 2&-25th May 2001 Tatranské Matliare Slovakia.**

163. C. Guizard, **M. Barboiu***, A. Bac, N. Hovnanian, «Hybrid organic-inorganic membranes with specific transport properties. Applications in separation and sensor technologies. », **Conférence plénière** - International Conference on Inorganic Membranes, 26-30 Juin **2000** Montpellier, France.

164. **M. Barboiu***, **Plenary Lecture**, « Molecular Recognition and Self assembling a new challenge in facilitated membrane transport », *XXVnd National Scientific Conference*, 6-8 oct. 1999, *Calimanești, Roumanie*.

Invited Seminars- 81

1. **M. Barboiu***, **Invited Webinar**, CME Spring Seminar Series: Artificial Water Channels-Toward Biomimetic Membranes for Desalination, University of Kentucky College of Engineering, 03 March **2021**. https://uky.zoom.us/webinar/register/WN_Wrbd1Qr1SZCYOy4H25OClw

2. **M. Barboiu***, **Invited Seminar**, Artificial Water Channels-Supramolecular Chemistry Seminar, Prof. Fabien Cognon, Department of Organic Chemistry, University of Geneva, Swiss, 16 december 2019.

3. **M. Barboiu***, **Invited Seminar**, Pyrene-box and Calix- box capsules - adaptive encapsulation and structure determination of unstable or non-crystalline guests, Prof. Makoto Fujita, Tokyo University, Tokyo, Japan. 24 October 2019.

4. **M. Barboiu***, **Invited Seminar**, Pyrene-box and Calix- box capsules - adaptive encapsulation and structure determination of unstable or non-crystalline guests GTR-IGER-VBL Seminar, Prof. Eiji Yashima, Nagoya University, Nagoya, Japan. 15 October 2019.

5. **M. Barboiu***, **Invited Seminar**, Artificial Water Channels-Supramolecular Chemistry Seminar, Prof. Tomoki Ogoshi, Kyoto University, Kyoto, Japan, 10 October 2019.

6. **M. Barboiu***, **Invited Seminar**, Dynamic Constitutional Frameworks – new tools for exploring biorecognition. NanoLSI Open Seminar, Prof. Katsuhiko Maeda Kanazawa University, Kanazawa, Japan, 07 October 2019.

7. **M. Barboiu***, **Invited Seminar**, Artificial Water Channels GTR-IGER-VBL Seminar, Prof. Eiji Yashima, Nagoya University, Nagoya, Japan. 04 October 2019.

8. **M. Barboiu***, **Invited Seminar**, Artificial Water Channels-toward highly selective membranes for desalination Dr. Pierre Rabu, IPCMS, Strasbourg, 22 Mai **2019**.

9. **M. Barboiu***, **Invited Seminar**, Artificial Water Channels-toward highly selective membranes for desalination Prof. Bing Gong, University of Buffalo, Buffalo, USA 8 Mai **2019**.

10. **M. Barboiu***, **Invited Seminar**, Artificial Water Channels-toward highly selective membranes for desalination Prof. Jinghua Chen, School of Pharmaceutical Sciences. Jiangnan University, Wuxi, China. 12 Mars **2019**.

11. **M. Barboiu***, **Invited Seminar**, Artificial Water Channels-toward highly selective membranes for desalination CNR, Dr. Lidietta Giorno, Rende, Italy 15 February 2019.

12. **M. Barboiu***, **Invited Seminar**, Rubbery organic frameworks-tuning the gas-diffusion through dynamic membranes, Prof. Liyuan Deng, Department of Chemical Engineering, Norwegian University of Science and Technology (NTNU) and Dr. Marius Sandru, SINTEF, Trondheim, 11 January 2019.

13. **M. Barboiu***, **Invited seminar**, Dynamic Constitutional Frameworks – new tools for exploring biorecognition. Prof. Jean-Serge Remy, Laboratoire de Conception et Application de Molécules Bioactives (CAMB) UMR 7199 CNRS Université de Strasbourg, Faculté de Pharmacie, Illkirch, France. 19 December **2018**.

14. **M. Barboiu***, **Invited Lecture**, Artificial Water Channels-toward highly selective membranes for desalination KAUST University, Prof. Nivine M. Khachab, KAUST, Saudi Arabia 22 November **2018**.
15. **M. Barboiu***, **Invited Lecture**, Artificial Water Channels-toward highly selective membranes for desalination University of Pays Basque, BC Materials Prof. Senentxu Lanceros, Bilbao. Spain. 15 November **2018**.
16. **M. Barboiu***, Encapsulation *versus* self-aggregation toward highly selective artificial K⁺-Channels, Sun Yat Sen University, Doctoral School, 30 October **2018**, Guangzhou, China.
17. **M. Barboiu***, Invited Lecture, Artificial Water Channels-toward highly selective membranes for desalination Fudan University, Prof. Jun Li Hou. Shanghai, China. 19 september **2018**.
18. **M. Barboiu***, **Invited seminar**, Dynamic Constitutional Frameworks – new tools for exploring biorecognition. Prof. Jinghua Chen, School of Pharmaceutical Sciences. Jiangnan University, Wuxi, 11 september **2018**.
19. **M. Barboiu***, **Invited seminar**, Molecular encapsulation, Prof. Ion Grosu, University Babes Bolyai, Cluj Napoca, Romania, 04 July **2018**.
20. **M. Barboiu***, **Invited seminar**, Artificial Water Channels, UNIVERSITÉ TOULOUSE III - Paul Sabatier, Laboratoire des IMRCP, 09 Avril **2018**.
21. **M. Barboiu***, **Invited seminar**, Dynameric networks for biomolecular recognition, Beijing Normal University (Host: Prof. Qing-Zheng Yang, Beijing, 05 January, **2018**.
22. **M. Barboiu***, **Invited seminar**, Dynameric networks for biomolecular recognition, Tsinghua University (Host: Prof. Huaping Xu), Beijing, 04 January, 2018.
23. **M. Barboiu***, **Invited seminar**, Artificial Water Channels, Institute of Chemistry, Chinese Academy of Sciences, Host : Prof. De-Xian Wang, Beijing, 03 January, 2018.
24. **M. Barboiu***, **Invited seminar**, Artificial Water Channels, Universite de Lorraine, Nancy, France, Prof. Andreea Pasc, 29 Novembre **2017**.
25. **M. Barboiu***, **Invited seminar**, Artificial Water Channels, European Institute for Chemistry and Biology, Bordeaux, France, Dr. Ivan Huc, 17 June **2017**.
26. **M. Barboiu***, **Invited Lecture**, Artificial Water Channel Systems, University of Barcelone, Prof. Eliseo Ruiz, 11 Mai **2017**, Barcelona, Spain.
27. **M. Barboiu***, **Invited Lecture**, From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, Ressenlaer Polytechnic Institute, Prof. Steve Cramer, Troy, NY, USA 28 Mars **2017**.
28. **M. Barboiu***, **Invited seminar**, Molecular encapsulation of dynamic systems inside the crystalline cages, Shanghai University, Prof. Hegui Gong, 05 January **2017**.
29. **M. Barboiu***, Invited Lecture, **Dynamic Constitutional Frameworks**, Fudan University, Prof. Jun Li Hou. Shanghai, China. 04 January **2017**.
30. **M. Barboiu***, **Invited Lecture**, Artificial Water Channels, Sun Yat Sen University, Doctoral School, 10 November **2016**, Guangzhou, China.
31. **M. Barboiu***, **Invited Lecture**, Artificial Water Channel Systems, SUSTC University, Prof. Wei Jiang, 31 October **2016**, Shenzhen, China.
32. **M. Barboiu***, **Invited seminar**, Molecular encapsulation of dynamic systems inside the crystalline cages, Institut des Sciences et Ingenierie Suairespramoleculaires, Strasbourg, France Prof. Jean-Marie Lehn, 08 December **2015**.

33. **M. Barboiu***, **Invited Lecture**, From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, Hong Kong University, Prof. Chuyang Y. Tang, 24 November **2015**, Hong Kong.
34. **M. Barboiu***, **Invited Lecture**, NSA Research Overview, Sun Yat Sen University, Prof. Chuyong Su, 18 November **2015**, Guangzhou, China.
35. **M. Barboiu***, **Invited Lecture**, From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, Fudan University, Prof. Jun Li Hou. 12 November **2015**, Shanghai, China.
36. **M. Barboiu***, **Invited Lecture**, From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, Ressenlaer Polytechnic Institute, Dr. George Belfort, Troy, NY, USA 05 June **2015**.
37. **M. Barboiu***, **Invited Lecture**, From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, Penn State University, State College, PA, Prof. Manish Kumar, USA 08 June **2015**.
38. **M. Barboiu***, **Invited Lecture**, From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, Temple University, Philadelphia, PA, Prof. Marc Ilies, USA 10 June **2015**.
39. **M. Barboiu***, **Invited Lecture**, G-Quadruplex-what else..., Maryland University, Washington DC, DC, Prof. Jeff Davis, USA 12 June **2015**.
40. **M. Barboiu***, **Invited lecture**, From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, Lawrence Livermore National Laboratory, Bioscience and Biotechnology Division Livermore. Dr. F. Fornassiero, 3 April, **2015**.
41. **M. Barboiu***, **Invited seminar**, Molecular encapsulation of dynamic systems inside the crystalline cages, European Institute for Chemistry and Biology, Bordeaux, France, Dr. Ivan Huc, 20 January **2015**.
42. **M. Barboiu***, **Invited seminar**, Dynamic Interactive Systems-toward natural selection of functions, Prof. Kim Il, Busan University Korea, 9 November **2014**.
43. **M. Barboiu*** **Invited seminar**, Artificial Water Channels, Prof. Yong Soo Kang, FTC (Fusion Technology Center) Hanyang University, Seoul, Korea, 16 October **2014**.
44. Y.M. Legrand, **M. Barboiu***, **Invited seminar**, Dynamic Interactive Systems-toward natural selection of functions, Prof. Ion Grosu, University Babeş Bolyai, Cluj Napoca, Romania, 15 Mai **2014**.
45. **M. Barboiu*** **Invited seminar**, Glyconanoparticules-sugar protein interaction at nano level, Prof. Ion Grosu, University Babeş Bolyai, Cluj Napoca, Romania, 15 Mai **2014**.
46. **M. Barboiu***, **Invited lecture**, Self-assembled biomimetic channels and materials, Cours de chimie de recyclage, ICSM, Marcoule 16 Janvier **2014**.
47. **M. Barboiu***, **Invited lecture**, Dynamic Constitutional Systems, Department of Chemistry, Ecole Polytechnique Palaiseau, France, 29 Novembre **2013**.
48. **M. Barboiu***, **Invited plenary lecture**, Dynamic constitutional systems-toward biomimetic ion- and water channels, Lehn Institute for Advanced Materials, Sun Yat Sen University, Guangzhou, China, 31 Octobre **2013**.
49. **M. Barboiu***, **Invited plenary lecture**, Dynamic constitutional Materials, Lehn Institute for Advanced Materials, Sun Yat Sen University, Guangzhou, China, 29 Octobre **2013**.
50. **M. Barboiu***, **Invited seminar**, Dynamic Interactive Systems-toward natural selection of functions, Prof. Carole Arnal-Herault, ENSIC Nancy, France, 17 Mai **2013**.

51. Y.M. Legrand, A. Gilles, E. Petit, A.van der Lee, **M. Barboiu***, Invited seminar Cyclobutadiene : Eternellement éphémère?, Prof Carlo Adamo, ENSCP Paris, Lanoratoire d'Electrochimie, Chimie des Interfaces, 22 Novembre **2011**.
52. **M. Barboiu***, Invited seminar, Dynamic Interactive Systems-toward natural selection of functions, Prof. Bruno Andrioletti, ICBMS-UMR5246-Université Claude Bernard-Lyon 1, France, 17 november **2011**.
53. **M. Barboiu***, Invited seminar, Dynamic Interactive Systems-toward natural selection of functions, Samsung Advanced Institute of Technology- SAIT Suwon, Korea, 24 october **2011**.
54. **M. Barboiu***, Invited seminar, Dynamic Interactive Systems-toward natural selection of functions, Korean Institute for Energy Research, Daejon, Korea, 25 october **2011**.
55. **M. Barboiu***, Invited seminar, Dynamic Interactive Systems-toward natural selection of functions, Prof. Ion Grosu, University Babes Bolyai, Cluj Napoca, Romania, 6 september **2011**.
56. **M. Barboiu***, D. Quemener, Invited lecture, Project STREAM, *Institut of Macromolecular Chemistry, Petru Poni, Iasi, Roumanie, 24 janvier 2011*.
57. **M. Barboiu***, Invited lecture, **Prof. Marc Salle** and **Dr. Narcis Avarvari**, Dynamic constitutional materials, crystallization and sol-gel driven self-selection of functional supramolecular architectures, University of Angers, France 30, Avril 2010.
58. **M. Barboiu***, Invited lecture, **Prof. Nicolas Giuseppone**, Dynamic constitutional materials, crystallization and sol-gel driven self-selection of functional supramolecular architectures. Institut Charles Sadron, Strasbourg France, 16 december 2009.
59. **M. Barboiu***, E. Mahon, Invited Lecture, **Dr. Teodor Aastrup**, Dynamic materials for sensing applications, ATTANA AB, 14 october 2009
60. **M. Barboiu***, Invited lecture, **Prof. Gheorghe Nechifor**, From self-organized to constitutional membranes- toward self-adaptive facilitated transport, *University Politehnica of Bucharest, Romania, 4 Mai 2009*.
61. **M. Barboiu***, Invited lecture, **Prof. Gheorghe Nechifor**, *Dynamic and hybrid polymers for constitutional recognition, University Politehnica of Bucharest, Romania, 5 Mai 2009*.
62. **M. Barboiu***, Invited lecture, **Prof. Gheorghe Nechifor**, *Dynamic chemical devices, University Politehnica of Bucharest, Romania, 6 Mai 2009*.
63. **M. BARBOIU*** Invited lecture, **Prof Christine Mousty**, Dynamic hybrid materials for constitutional selective membranes, *Université Blaise Pascal, Clermont Ferrand, France 3 December 2008*.
64. **M. BARBOIU***, Invited lecture, **Prof Yong Soo Kang**, From self-organized to constitutional membranes- toward self-adaptive facilitated transport, *Hanyang University, Seoul, Korea, 5 November 2008*.
65. **M. BARBOIU*** Invited lecture, **Prof Yong Soo Kang**, *Dynamic and hybrid polymers for constitutional recognition, Hanyang University, Seoul, Korea, 4 November 2008*.
66. **M. BARBOIU***, Invited lecture, **Prof Olof Ramstrom**. Design, Synthesis and properties of adaptative supramolecular nanosystems, *Royal Institute of Technology, KTH-Stockholm, Sweden, 4 June 2008*.
67. **M. BARBOIU***, Invited lecture, **Dr. Pierre Rabu**. Hybrid Biomimetic Membranes...Past, present and below..., *Institut de Physique et Chimie des Matériaux, IPCMS, Strasbourg, France, 18 janvier 2008*.

68. **M. BARBOIU***, Invited lecture, **Prof. Robert Corriu**. « Hybrid supramolecular dynamic membranes as selective information transfer devices » *Séminaire de l'Ecole Doctorale 459 Sciences Chimiques et Physiques, Montpellier, France, 02 Novembre 2006.*
69. **M. BARBOIU***, Invited lecture, **Prof. Jonathan Nitszche**. « SUPRACOMBIMAT » methodology toward functional materials *Université de Geneve, Geneve, Swiss, 30 mars 2006.*
70. **M. BARBOIU***, Invited lecture, **Prof. Carles Miravittles**. Constitutional dynamic self-amplification in the dynamic constitutional libraries, *Institut de Ciencia de Materials de Barcelona, Barcelona, Spain, 5 mai 2006.*
71. **M. BARBOIU***, Invited lecture, **Prof. Bogdan Simionescu**. « Membranes hybrides adaptatifs » *Institut Petru Poni, Iasi, Roumanie, 16 septembre 2005..*
72. **M. BARBOIU***, Invited lecture, **Prof. Philippe Miele**. « Nanomatériaux hybrides adaptatifs » *Journée de l'Ecole Doctorale de Chimie de Lyon (ED206) Lyon, France, 25 May 2005.*
73. **M. BARBOIU***, Invited lecture, **Prof. Armand Lattes**. « Matériaux hybrides et dispositifs dynamiques » *Université Paul Sabatier Toulouse, France, 1 Mars 2005.*
74. **M. BARBOIU***, Invited lecture, **Prof. Stéphane Vincent**. « Matériaux hybrides dynamiques » *Facultés Universitaires Notre Dames de la Paix, Namur, Belgium, 30 Mai 2005.*
75. **M. BARBOIU***, Invited lecture, **Dr. Pierre Aimar** « Membranes hybrides dispositifs à transport facilité » *Université Paul Sabatier Toulouse, France, 10 Juin 2004.*
76. **M. BARBOIU***, Invited lecture, **Prof. Constantin Luca** « Nanomatériaux, applications aux technologies à membrane » *Université Politehnica de Bucarest, France, 25 Mai 2004.*
77. **M. BARBOIU***, Invited lecture, **Prof. Claudiu Supuran**. « Modulation of coiling/uncoiling molecular motion » *Université de Florence, Italie, 18 Mai 2003.*
78. **M. BARBOIU***, Invited lecture, **Prof. Luca Prodi** « Dispositifs dynamiques fonctionnels » *Université de Bologne, Italie, 18 Mai 2003.*
79. **M. BARBOIU***, **T. Thami** Invited lecture, Matériaux à reconnaissance moléculaire et auto-assemblés » *CEA Marcoule, France, Mai 2003.*
80. **M. Barboiu***, Invited lecture, **Prof. Jean-Marie Lehn**, « Membranes à transport facilité : reconnaissance moléculaire et auto-assemblage » *Collège de France, Université Louis Pasteur, Strasbourg, 07 Mai 2001.*
81. **M. Barboiu***, Invited lecture, **Prof. Jean-Marie Lehn**, « Nano-mechanical devices ». *Collège de France, Université Louis Pasteur, Strasbourg, 06 juillet 2001.*

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1. **M. Di Vincenzo**, A. Tiraferri, **M. Barboiu*** Highly permeable and selective reverse osmosis membranes incorporating artificial water channels. Artificial Water Channels Symposium, ACS Fall National Meeting, San-Diego USA, 25-29 August, **2019.**
2. **L. Huang**, **M. Barboiu*** Hydroxilic-pathways for water permeation-new mechanisms for water purification. Artificial Water Channels Symposium ACS Fall National Meeting, San-Diego USA, 25-29 August, **2019.**
3. **Y. Zhang**, **M. Barboiu*** Dynameric Asymmetric Membranes for Directional Water Transport Novel Polymeric Materials Symposium. ACS Fall National Meeting, San-Diego USA, 25-29 August, **2019.**

4. **M. Barboiu*** Artificial Water Channels – deconvolution of natural Aquaporins through synthetic design. IUPAC 2019, Paris, July 5-12, 2019.
5. **M. Barboiu*** Self-assembled biomimetic water and k⁺ channels-toward natural selection of functions. IUPAC 2019, Paris, July 5-12, 2019.
6. R. Yu, S Li*, **M. Barboiu***, Synthesis and characterization of dynamic CMCS-based hydrogel, IUPAC 2019, Paris, July 5-12, 2019.
7. **M. Barboiu***, Calix-box capsules for adaptive encapsulation and structure determination, 15th International Conference on Calixarenes-Calix 2019, Cassis, June 10-14, **2019**.
8. **M. Barboiu***, Artificial Water Channels toward biomimetic membranes for desalination, 9th International Symposium on Macrocyclic & Supramolecular Chemistry (ISMSC-14). 2-6 June **2019**, Lecce, Italy **2019**.
9. **M. Barboiu***, Artificial Water Channels toward biomimetic membranes for desalination, SupraChem2019, Würzburg, Germany. February, 24-26, **2019**.
10. **M. Barboiu***, Artificial Water Channels, Euromembrane 2018, Valencia, Spain July 09-13, **2018**.
11. **M. Barboiu***, Rubbery organic frameworks-facilitated transport through dynameric membranes, Euromembrane 2018, Valencia, Spain, July 09-13, **2018**.
12. M. Di Vincenzo, Y.-M. Legrand, S. Roualdés, **M. Barboiu***, Development of Reverse Osmosis membranes incorporating Artificial Water Channel (AWC) Systems, SCF 18, Montpellier (France), 02-04 juillet **2018**.
13. **M. Barboiu***, DyNAVectors: Dynamic constitutional vectors for adaptive DNA delivery. PAPER ID: 2969884, COLL 285, Division of Colloidal Chemistry, SESSION: Synthetic Self-Assembled Systems for Drug & Nucleic Acid Delivery: New Materials, Formulation Strategies, Targeting, Toxicity & Regulatory Issues, 256th ACS National Meeting, Boston, MA, August 19-23, **2018**.
14. **M. Barboiu***, Structure-driven selection of adaptive transmembrane Na⁺ carriers or K⁺ channels. PAPER ID: 2969888, ORG 285, Division of Organic Chemistry, SESSION: Molecular Recognition & Self-Assembly, 256th ACS National Meeting, Boston, MA, August 19-23, **2018**
15. **M. Barboiu***, Pyrene-box capsules for adaptive encapsulation and structure determination of unstable or non-crystalline biogenic compounds PAPER ID: 2845181, ORGN 285, Division of Organic Chemistry, SESSION: Molecular Recognition & Self-Assembly, 255th ACS National Meeting, New Orleans, LA, March 18-22, **2018**.
16. S. Murail, T. Vasiliu, A. Neamtu, **M. Barboiu***, F. Sterpone and M. Baaden, Water permeation across artificial I-quartet membrane channels: from structure to chaos. Artificial Water Channels Faraday Discussion, Glasgow (UK), 25-27 juin 2018.
17. Z. Sun, I. Kocsis, Y. Li, Y.-M. Legrand and **M. Barboiu***, Imidazole derivatives as Artificial Water Channel building-blocks: structural design influence on water permeability. Artificial Water Channels Faraday Discussion, Glasgow (UK), 25-27 juin 2018.
18. Y. Shen, I. Kocsis, **M. Barboiu*** and M. Kumar, Functional Reconstitution and Characterization of Artificial Proton Channels in Artificial Membranes, 2017 AIChE Annual Meeting, 29 October - 3 November **2017**, Minneapolis, MN, USA.
19. I. Kocsis, M. Sorci, H. Vanselous, S. Murail, S. Sanders, E. Licsandru, Y. M. Legrand, A. van der Lee, M. Baaden, P. Petersen, **M. Barboiu*** and G. Belfort, Dipole Oriented Water Wires Confined in Artificial Chiral Membrane Channels. 2017 AIChE Annual Meeting, 29 October - 3 November **2017**, Minneapolis, MN, USA.

20. I. Kocsis, Y.-M. Legrand, **M. Barboiu***, Artificial water channels as simple tools for biomimetic membranes, 11th International Congress on Membranes and Membrane Processes, ICOM2017, 30 July- 5 August, **2017**, San Francisco, USA
21. Y.-M. Legrand, A. Gilles, Z. Sun, I. Kocsis, **M. Barboiu***, Highly Selective Artificial K⁺ Channels within bilayer membranes, 11th International Congress on Membranes and Membrane Processes, ICOM2017, 30 July- 5 August, **2017**, San Francisco, USA.
22. **M. Barboiu***, Highly Selective Biomimetic Artificial K⁺ Channels, Molecular Recognition & Self-Assembly Symposium, 253rd American Chemical Society National Meeting, 2-6 April, **2017**, San-Francisco, CA, USA.
23. **M. Barboiu***, Artificial water channels exhibiting enhanced dipolar water translocation, Novel Membrane Materials & Processes for Water Purification Symposium, 253rd American Chemical Society National Meeting, 2-6 April, **2017**, San-Francisco, CA, USA.
24. **M. Barboiu***, Rubbery Organic Frameworks-ROFs, ECI Conference Series, Separations Technology IX: New Frontiers in Media, Techniques, and Technologies, 5-10 March **2017** Albufeira, Portugal.
25. **M. Barboiu***, Artificial Water channels, Congres 2015 de la Société Chmique de France. Recent highlights in Chemistry, 7-9 July, **2015** Lille, France.
26. **M. Barboiu***, Stabilization of reactive/conformationally dynamic structures inside the rigid crystalline molecular cages, MRS Spring Meeting 2015, symposium MM: Crystal Engineering: Design, New Materials and Applications, 5-10 April **2015**, San-Francisco, USA.
27. **M. Barboiu***, From Natural to Bioassisted and Biomimetic Artificial Water Channels, MRS Spring Meeting 2015, symposium HH. Supramolecular Materials: Assembly and Dynamics, 5-10 April **2015**, San-Francisco, USA.
28. E. LICSandRU, S. TINGRY, **M.BARBOIU**, S. SCHNEIDER, E. MOULIN, N. GIUSEPPONE Supramolecular nanofibrils-toward nanoscaled electrode systems. MATERIAUX 2014, Montpellier, France, 24-28 November, **2014**.
29. M. Yahia, H. Osman, S.Cerneaux, **M. Barboiu***, Membrane separation and extraction of lanthanides with constitutional dynamic networks. 10e jour de l'Ecole Doctorale ED459, Montpellier, France, 19-20 Novembre **2014**.
30. Z.H. Sun, **M. Barboiu***, Design, Construction, Self-assembly of Cholesteryl-modified Ureido Crown Ethers and their Application in Ionic Transport, Self-Assembly of Biomolecules, Balard Chemistry Conferences, 12-15 October **2014**, La Grande Motte, France.
31. **M. Barboiu***, A. Mehdi, D. Dumitrescu Dynamic Nanoplatforms for Multivalent Biorecognition, Journées Présentations et bilans des projets lauréats 2012, 2013 et 2014 du LabEx CheMISyst, Montpellier, France 6-8 october 2014
32. **M. Barboiu***, B. Coasne, J.-Y. Winum, A. van der Lee, Y.-M. Legrand, Zhanhu Sun Chiral water systems – CHIRAWATER, Journées Présentations et bilans des projets lauréats 2012, 2013 et 2014 du LabEx CheMISyst, Montpellier, France 6-8 october 2014
33. **M. Barboiu***, F. Bonnete, T. Zemb, Canaux à eau synthétiques polarisés en systèmes lipidiques : vers une diode à eau Journées Présentations et bilans des projets lauréats 2012, 2013 et 2014 du LabEx CheMISyst, Montpellier, France 6-8 october 2014.
34. D. AILINCĂI, L. MARIN, D. PEPTĂNARIU, D. STAN, C. A. CONSTANTINESCU, M. CĂLIN, M. PINTEALĂ, **M. BĂRBOIU** Synthèse et caractérisation d'un nouveau transporteur non-viral d'ADN, à base de benztrialdehyde, Jeffamine D et polyethyleneimine (PEI) ramifié. Colloque Franco-Roumain de Chimie Appliquée-COFrROCA 2014, Montpellier, France, 15-17 September, **2014**.

35. E. LICSandRU, S. TINGRY, **M. BARBOIU**, S. SCHNEIDER, E. MOULIN, N. GIUSEPPONE Supramolecular nanofibrils-toward nanoscaled electrode systems. Colloque Franco-Roumain de Chimie Appliquée-COFRROCA 2014, Montpellier, France, 15-17 September, **2014**.
36. Cristina M. URITU, Rodinel ARDELEANU, Manuela CALIN, Narcisa Laura MARANGOCI, Bogdan MINEA, Stelian S. MAIER, **M. BARBOIU**, Mariana PINTEALA Des nanovecteurs à base de β -cyclodextrine, polyéthylène imine et polyéthylène glycol pour thérapie génique. Colloque Franco-Roumain de Chimie Appliquée-COFRROCA **2014**, Montpellier, France, 15-17 September, **2014**.
37. A. CRISTIAN, S. CERNEAUX, **M. BARBOIU*** Membranes composites en couches minces pour le dessalement de l'eau Colloque Franco-Roumain de Chimie Appliquée-COFRROCA 2014, Montpellier, France, 15-17 September, **2014**.
38. **M. Barboiu***, Y. Le Duc, A. Gilles, P.-A. Cazade, M. Michau, Y. M. Legrand, A. van der Lee,¹ B. Coasne, J. Post, T. Fyles An artificial primitive mimic of Gramicidin-A channel. 10th International Congress on Membranes and Membrane processes, ICOM2014, 20-25 July, **2014**, Shouzhou, China.
39. M. Yahia, H. Osman, S. Cerneaux, **M. Barboiu***, Membrane separation and extraction of lanthanides with constitutional dynamic networks. 10th International Congress on Membranes and Membrane Processes, ICOM2014, 20-25 July, **2014**, Shouzhou, China.
40. E. Licsandru, Y.-X. Shen, **M. Barboiu***, M. Kumar. Functional reconstitution and characterization artificial water channels for desalination. 10th International Congress on Membranes and Membrane processes, ICOM2014, 20-25 July, **2014**, Shouzhou, China.
41. A. van der Lee, D. Dumitrescu, Y.M. Legrand, E. Petit, **M. Barboiu***, Pressing variable-sized diammonium alkane springs into fixed-size hydrogen-bonded molecular containers, 23rd Congress and General Assembly of the International Union of Crystallography, 5-12 August **2014**, Montreal, Canada.
42. **M. Barboiu***, The Color of Self-Assembly- Real-Time Optical Detection of Stabilized Artificial G-Quadruplexes Under Confined Conditions, MRS Spring meeting 2014, symposium YY Meeting the Challenges of Understanding and Visualizing Mesoscale Phenomena, 20-25 April **2014**, San-Francisco, USA.
43. **M. Barboiu***, Rubbery Organic Frameworks-ROFs-Tuning the Gaz-Diffusion through Dynameric Membranes, MRS Spring meeting 2014, symposium I Materials for Carbon Capture, 20-25 April **2014**, San-Francisco, USA.
44. Z. Mouline, D. Quemener, **M. Barboiu***, Design of block copolymer self-assemblies - Toward novel membrane architectures and properties, 3rd International Symposium on Ceramics Nanotube Technology, March 2-4, **2014**, Nagoya Institute of Technology, Nagoya, Japan.
45. **M. Barboiu***, A. Mehdi, D. Dumitrescu Dynamic Nanoplatforms for Multivalent Biorecognition, Journées du LabEx CheMISyst "Rapports d'étape, Perspectives 2014 et Evolution" 3 mars **2014**, IEM – Montpellier, France
46. **M. Barboiu***, B Dynamic hybrid materials for constitutional self-instructed membranes, MRS Meeting, Symposium NN San Francisco, USA, 1-5 April, **2013**.
47. **M. Barboiu***, Biomimetic hybrid membrane systems-toward natural selection of functions, MRS Meeting, Symposium PP San Francisco, USA, 1-5 April, **2013**.
48. T. Macron, M. Drobek, S. Condom, A. Julbe, **M. Barboiu***, Gas separation trough ceramic supported dynameric membranes, EUROMAT2011, European Congress on Advanced Materials and Processes. Montpellier, France, 12-15 September **2011**.
49. **M. Barboiu***, Dynameric membranes: toward an adaptive constitutional transport, International Conference on Membranes, ICOM2011, Amsterdam, Netherlands, 24-29 July **2011**.

50. **M. Barboiu***, Dynamic interactive systems-dynamic selection in hybrid organic-inorganic constitutional networks, Hybrid Materials **2011**, Strasbourg, France, 6-10 March **2011**.
51. **M. Barboiu***, Membranes mésoporeuses nanostructures dynamiques, Matériaux 2010, Nantes, 18-22 octobre **2010**, France.
52. C. Arnal-Herault, M. Michau, A. Pasc, M. Barboiu*, Membranes dynamiques adaptatives nanostructurées à base des G-quadruplexes, Matériaux 2010, Nantes, 18-22 octobre **2010**, France.
53. T. Macron, G. Nasr, **M. Barboiu***, Dynameric membranes for gas separation: structural and geometric behaviours, Proceeding of European Membrane Summer School, Bucharest, Romania, 14-19 June 2010
54. Y.M. Legrand, A. Cazacu, A. Pasc, G. Nasr, A. van der Lee, **M. Barboiu***, Constitutional self-instructed dynamic membranes toward adaptive ion-channel devices, Proceeding of European Membrane Summer School, Bucharest, Romania, 14-19 June 2010.
55. Y. Le Duc, E. Mahon, S. Mihai, Y.M. Legrand, S. Tingry, A. van der Lee, **M. Barboiu***, Self-organized supramolecular ionic-channels in bilayer and polymeric membranes, Proceeding of European Membrane Summer School, Bucharest, Romania, 14-19 June 2010.
56. M. Michau, **M. Barboiu***, Self-organized hybrid proton exchange membranes, exhibiting high ionic conductivity, MRS Spring Meeting 2010, San-Francisco, USA, 5-9 April, 2010.
57. **M. Barboiu***, Dynamic biomimetic membranes: toward an adaptive ion-channels systems, MRS 2010 Spring Meeting, San-Francisco, USA, 5-9 April, 2010.
58. E. Mahon, **M. Barboiu***, Multivalent Biomimetic Glyconanoparticle Platforms as QCM Amplifiers for Lectin-Carbohydrate Interactions, MRS 2010 Spring Meeting, San-Francisco, USA, 21-25 March, 2010.
59. M. Michau, **M. Barboiu***, Self-organized hybrid proton exchange membranes, exhibiting high ionic conductivity, ACS 2010 Spring Meeting, San-Francisco, USA, 21-25 March, 2010.
60. M. Barboiu*, Dynamic biomimetic membranes: toward an adaptive ion-channels systems, ACS 2010 Spring Meeting, San-Francisco, USA, 21-25 March, 2010.
61. **M. Barboiu***, Dynameric Membranes: toward an adaptive constitutional transport, Euromembrane 2009, Montpellier, France 6-10 september, 2009.
62. Y. M. Legrand, A. Cazacu, A. Pasc, **M. Barboiu***, Constitutional self-instructed membranes-toward adaptive ion-channel devices, Euromembrane 2009, Montpellier, France 6-10 september, 2009.
63. Y. Leduc, **M. Barboiu***, Dynamic biomimetic membranes: toward an adaptive ion-channels systems, Euromembrane 2009, Montpellier, France 6-10 September, 2009.
64. S. Mihai, Y. Leduc, **M. Barboiu***, Dynamic biomimetic membranes: toward an adaptive neuroreceptors systems, Euromembrane 2009, Montpellier, France 6-10 September, 2009.
65. G. Nasr, C. Charmette, J. Sanchez, **M. Barboiu***, Dynameric Materials for CO₂ separation Membranes: toward an adaptive transport membranes, Euromembrane 2009, Montpellier, France 6-10 september, 2009.
66. **M. Barboiu***, Dynamic hybrid materials for constitutional selective membranes, Aseanian Membrane Society Conference AMS 5, Kobe, Japan, 12-14 July 2009
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