LIST OF PUBLICATIONS, JULY 2025

Mihail-Dumitru BARBOIU

Peer review publications – 374
Peer review papers 309
Peer review proceedings –31
Books and Chapters – 25
Patents-7
Press coverage and vulgarisation-28

Invited lectures and communications -494

Invited Lectures-196
Invited Seminars – 89
Communications -142
Posters-67

The top 10 publications, as senior author

1. W.X Feng,* D. Chen, Y. Zhao, B. Mu, H. Yan,* **M. Barboiu*** , Modulation of Deep-Red to Near-Infrared Room Temperature Charge-Transfer Phosphorescence of crystalline "Pyrene-Box" Cages by coupled ion/guest structural self-assembly. *J. Am. Chem. So*c.**, 2024,** *146***,** 2484-2493.
2. I.-M. Andrei, W. Chen, M. Baaden, S. Vincent*, **M. Barboiu***, Proton versus cation selective transport of saccharide rim-appended pillar[5]arene PA-S artificial water channels, *J. Am. Chem. So*c., **2023**, *145*, *40*, 21904–21914
3. I. -M. Andrei, Iuliana; A. Chaix, B.T. Benkhaled, R. Dupuis, C. Gomri, E. Petit, Eddy, M. Polentarutti, A. van der Lee, Arie, M Semsarilar*, **M. Barboiu***, Selective Water Pore Recognition and Transport through Self-assembled Alkyl-ureido-Trianglamine Artificial Water Channels. *J. Am. Chem. So*c., **2023**, 145, 21213–21221.
4. L.-B. Huang, F. Mamiya, M. Baaden, E. Yashima*, **M. Barboiu***, Self-Assembling Peptide-Appended Metallomacrocycle Pores for Water Translocation. *ACS Appl. Mater. Interfaces* **2023**, *15* 40133–40139.
5. I.-M. Andrei, D. Strilets, S. Fa, M. Baaden, T. Ogoshi,* **M. Barboiu*,** Combinatorial screening of water/proton permeation of self-assembled Pillar[5]arene artificial water channel libraries *Angew. Chem. Int. Ed.* **2023**, e202310812
6. D.-D. Su, S. Ulrich, **M. Barboiu***, Bis-Alkylureido Imidazole Artificial Water Channels, *Angew. Chem*. **2023,** DOI: 10.1002/ange.202306265; *Angew. Chem. Int. Ed.* **2023**, *62*, e202306265
7. 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. *Nature Nanotechnol.* **2021**, *16*, 190-196.
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**, *132(51)*, 23413-23419. DOI: 10.1002/ange.202009219; *Angew. Chem. Int. Ed.* **2020**, *59(51)*, 23213-23219. DOI: 10.1002/anie.202009219
9. 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, 18920-18296DOI: 10.1002/anie.202008393
10. 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

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.

Peer review papers – 309

1. S.L. Deng, Y.-Y. Xiong, C.-X. Chen, Q.-H. Dai, Y.-X. Chen, W. Geng, Z.-Y. Liang, W.-L. Ruan, Z.-W. Wei, M. Barboiu, C.-Y. Su, Achieving Diverse CO2 Conversions through On-Demand Installation of Multivariate Catalytic Sites into One Prototypical Metal−Organic Framework. *J. Am. Chem. Soc.* **2025**, *147*, 19996−20007. https://doi.org/10.1021/jacs.5c05028

2. S. Ning, Z. Chen, H. Huang, Z. Liu, Y. He, D. Wang, Y. Fan, C.-X. Chen, M. Barboiu, C.-Y. Su, Hot Interband Carrier Exploitation in a Ru/MOF Schottky Junction for Photocatalytic CO_2 Reduction *Small,* **2025**, 2504721**.** https://doi.org/10.1002/smll.202504721

3. D**.** Yue, R**.**-M**.** Li, H**.**-T**.** Zheng, L**.** Yan, L**.** Song, R**.** Langer, **M. Barboiu**, Z**.**-W**.** Wei, J**.**-J**.** Jiang, C**.**-Y**.** Su**,** Optimizing Pore Size and Polarity in Halogen-Functionalized Metal−Organic Frameworks for Efficient Xenon/Krypton Separation: A Synergistic Strategy *ACS Appl. Mater. Interfaces* **2025**, 17, 36252−36259**.** https://doi.org/10.1021/acsami.5c08672

4. S. Pophali, D.-D. Su, R. Ata, T. Vijayakanth, S. Nandi, R. Jain, L. J. W. Shimon*, R. Misra*, **M. Barboiu***, Metal Directed Self-assembly of Minimal Heterochiral Peptide into Metallo-supramolecular β-helical Tubules for Artificial Transmembrane Water Channels**,** *J. Am. Chem. Soc*., **2025.** https://pubs.acs.org/doi/10.1021/jacs.5c03970

5. N. Maté, E. Bogdan, **M. Bărboiu**, L. Cata, N. D. Hădade, A.M. Terec, I. Grosu* Large multi-functional triphenylamine derivatives as versatile candidates for porous supramolecular materials. *Tetrahedron* **2025**, *178*, 134630 https://doi.org/10.1016/j.tet.2025.134630.

6. R. Wang, S. Wang, J. Chen, Y. Xu, X. Yu, M. Barboiu, Y. Zhang, Enhanced activity and self-regeneration in dynameric cross-linked enzyme nano-aggregates. *Science Adv.* **2025,** *11***,** eads9371**.** https://www.science.org/doi/epdf/10.1126/sciadv.ads9371

7. F. Yi, L.-B. Huang,* L. Kong, Y. Chen, Jie Gao, X. Meng, Z. He, M. Barboiu,* Z. Jiang*, Artificial Water Channels-MXene Membranes for Enhanced Desalination" *CCS Chemistry,* **2025***,* https://doi.org/10.31635/ccschem.025.202405207

8. S. Jayakumar, P. Trens, M. Barboiu, S. Cerneaux, Hydrophobic cordierite-based capillary membranes applied to desalination. *Sep. Pur. Tech.* **2025**, *359* 130679. https://doi.org/10.1016/j.seppur.2024.130679.

9. H.-T. Zheng, L. Song, L. Yan, X.-H. Xiong, Y.-L. Lu, C.-X. Chen, **M. Barboiu**, Z.-W. Wei, J.-J. Jiang*, C.-Yong Su , Three-dimensional linker-promoted hierarchical porous metal–organic framework for natural gas purification *Sep. Pur. Tech.* **2025** *354*, 129466. https://doi.org/10.1016/j.seppur.2024.129466

10.D. D. Su, A. Van der Lee, **M. Barboiu,*** Partitioning / self-assembly of artificial water channels - toward controlled permselectivity through bilayer membrane. *Angew. Chem*. **2025**, 137, e202413816 https://doi.org/10.1002/ange.202413816; *Angew. Chem. Int. Ed.* **2025***, 64,* e202413816. https://doi.org/10.1002/anie.202413816

11.L. B. Huang, D.D. Su, A. Hardiagon, I. Kocsis, A. van der Lee, F. Sterpone, M. Baaden, **M. Barboiu***, Water- Pore Flow Permeation through Multivalent H-bonding Pyridine-2,6-Dicarboxamide-Histamine/Histidine Water Channels. *J. Am. Chem. Soc*., **2025,** *147*, 1, 678–686. https://pubs.acs.org/doi/10.1021/jacs.4c13072

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13.M. Sandru, M. Prache, T. Macron, L. Căta, M. G. Ahunbay, M.-B. Hägg, G. Maurin, M. Barboiu Rubbery Organic Frameworks- ROF toward ultra permeable CO_2 selective membranes. *Science Adv.* **2024,** 10, eadq5024. https://www.science.org/doi/10.1126/sciadv.adq5024.

14.S. Daakour, G.Nasr**, M. Barboiu*** Dynamic constitutional gold nanoparticles frameworks for carbonic anhydrase activation, *ACS Appl. Nano Mater.*, **2024**, *7(17)*, 20240–20248. https://doi.org/10.1021/acsanm.4c03098

15.bH.-T. Zheng, L. Song, L. Yan, X.-H. Xiong, Y.-L. Lu, C.-X. Chen, **M. Barboiu**, Z.-W. Wei, J-J. Jiang*, C.-Y. Su, Three-dimensional linker-promoted hierarchical porous metal–organic framework for natural gas purification. *Sep. Pur. Tech* **2025**, *354*, 129466. https://doi.org/10.1016/j.seppur.2024.129466

16.Y. Zhang, Y. Li, J.Y. Gu, J. Wu, Y.X. Ma, G. Lu, **M.Barboiu,*** J.Chen* Glycopolymeric Micellar Nanoparticles for Platelet-Mediated Tumor-Targeted Delivery of Docetaxel for Cancer Therapy, *ACS Appl. Mater. Interfaces* **2024**, *16*, 44528−44537. DOI: 10.1021/acsami.4c09548

17.S. Daakour, N. D. Hadade, **M. Barboiu**,* Pillar[*n*]arenes - adaptive artificial water/ion/proton channels in membranes, Tetrahedron Lett. **2024**, 145, 155178. https://doi.org/10.1016/j.tetlet.2024.155178

18.C. Dutta, P. Krishnamurthy, D.D. Su, J. Li, S. H. Yoo, G. W. Collie, M. Pasco, J. Fan, M. Luo, **M. Barboiu**,* G. Guichard,* R. M. Kini,* P. Kumar* Innovative self-assembly of 15-mer chimeric α-peptide-oligourea foldamers toward Cl^- selective ion channels, *Small Sci.* **2024**, 2300352. https://onlinelibrary.wiley.com/doi/10.1002/smsc.202300352

19.A. Mukherjee, Y. Huang, J. Elgeti, S. Oh, J. G. Abreu Jr, A. Rebecca Neliat, J. Schüttler, D.-D. Su, N. C. Benites, X. Liu, L. Peshkin, **M. Barboiu**, H. Stocker, M. W Kirschner, M. Basan. Membrane potential as master regulator of cellular mechano-transduction, *bioRxiv* https://doi.org/10.1101/2023.11.02.565386

20.D.D. Su, **M. Barboiu*** Hydrogen-bonded water-wires/clusters Toward natural selectivity of artificial water channels *Coord. Chem. Rev.* **2024**, *515***,** 215973. https://doi.org/10.1016/j.ccr.2024.215973

21.K. Nursiah, S. J. Bohr, L. K. Atfane, S. Cerneaux*, S. Barbe*, M. D. Barboiu*, PVDF membranes for membrane distillation prepared by VIPS–A combined study of artificial water channel effectiveness and membrane performance prediction. *Open Research Europe* **2024**, *4*, 102. https://open-research-europe.ec.europa.eu/articles/4-102. https://doi.org/10.12688/openreseurope.17462.1

22.W.X Feng,* D. Chen, Y. Zhao, B. Mu, H. Yan,* **M. Barboiu*** , Modulation of Deep-Red to Near-Infrared Room Temperature Charge-Transfer Phosphorescence of crystalline "Pyrene-Box" Cages by coupled ion/guest structural self-assembly. *J. Am. Chem. Soc.***, 2024,** *146***,** 2484-2493. https://doi.org/10.1021/jacs.3c10206

23. **M. Barboiu***, B. Kirchner*, E. Perlt*, A. Scarso* H2Open-Guest Editorial, *ChemistryOpen* **2024,** 13, e202300072. https://doi.org/10.1002/open.202300072

24.K. Nursiah, V.-E. Musteata, S. Cerneaux,* **M. Barboiu*** Artificial water channels-embedded PVDF membranes for direct contact membrane distillation and ultrafiltration. *Front. Membr. Sci. Technol.* **2023**, *2*, 1241526. doi: 10.3389/frmst.2023.1241526

25. I.-M. Andrei, W. Chen, M. Baaden, S. Vincent*, **M. Barboiu***, Proton versus cation selective transport of saccharide rim-appended pillar[5]arene PA-S artificial water channels, *J. Am. Chem. Soc.*, **2023**, *145*, *40*, 21904–21914 https://doi.org/10.1021/jacs.3c06335

26. I. -M. Andrei, Iuliana; A. Chaix, B.T. Benkhaled, R. Dupuis, C. Gomri, E. Petit, Eddy, M. Polentarutti, A. van der Lee, Arie, M Semsarilar*, **M. Barboiu***, Selective Water Pore Recognition and Transport through Self-assembled Alkyl-ureido-Trianglamine Artificial Water Channels. *J. Am. Chem. Soc.*, **2023**, 145, 39, 21213–21221. https://pubs.acs.org/doi/10.1021/jacs.3c02815

27. L.-B. Huang, F. Mamiya, M. Baaden, E. Yashima*, **M. Barboiu***, Self-Assembling Peptide-Appended Metallomacrocycle Pores for Selective Water Translocation. *ACS Appl. Mater. Interfaces* **2023**, *15*(*33*) 40133–40139. https://doi.org/10.1021/acsami.3c09059

28. I.-M. Andrei, D. Strilets, S. Fa, M. Baaden, T. Ogoshi,* **M. Barboiu*,** Combinatorial screening of water/proton permeation of self-assembled Pillar[5]arene artificial water channel libraries, *Angew. Chem*. **2023,** DOI: 10.1002/ange.202310812; *Angew. Chem. Int. Ed.* **2023**, e202310812 DOI: 10.1002/anie.202310812.

29. D.-D. Su, S. Ulrich, **M. Barboiu***, Bis-Alkylureido Imidazole Artificial Water Channels, *Angew. Chem*. **2023,** DOI: 10.1002/ange.202306265; *Angew. Chem. Int. Ed.* **2023**, *62*, e202306265 DOI: 10.1002/anie.202306265.

30. C. Dutta, P. Krishnamurthy, D.Su, S. H. Yoo, G. W. Collie, M. Pasco, J. K. Marzinek, P. J. Bond, C. Verma, A. Grélard, A. Loquet, J. Li, M Luo, M. Barboiu,* G. Guichard,* R. M. Kini,* P.P. Kumar*, Nature-inspired synthetic oligourea foldamer channels allow water transport with high salt rejection. *Chem*, **2023**, *9(8)*, 2237-2254. https://doi.org/10.1016/j.chempr.2023.04.007

31. S.-P. Zheng, W-X. Feng, J-J Jiang, D Wang, A van der Lee, **M. Barboiu***, Adaptive encapsulation of 1,ω-amino-acids within the "Pyrene box". *Israel J. Chem*. **2023**, e202300021. DOI: 10.1002/ijch.202300021.

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33. H. Huang, S. Ning, Y. Xie, Z. He, J. Teng, Z. Chen, Y. Fan, J.-Y. Shi, **M. Barboiu**, D. Wang,* C.-Y. Su. Synergistic modulation of electronic interaction to enhance intrinsic activity and conductivity of Fe–Co–Ni hydroxide nanotube for highly efficient oxygen evolution electrocatalyst, *Small*, **2023**, DOI: 10.1002/smll.202302272.

34. M.-C. Sardaru, S. Morariu, O.-E. Carp, E.-L. Ursu, A. Rotaru*, **M. Barboiu*** Dynameric G-quadruplex – Dextran hydrogels for cell growth applications. *Chem. Commun.*, **2023**, *59*, 3134–3137. DOI: 10.1039/D2CC06881H.

35. A.M. Bondar*, **M. Barboiu*** Proton at Biointerfaces, *Biochim and Biophys Acta. BBA Biomembranes*, **2023**, *1865*, 184139. https://doi.org/10.1016/j.bbamem.2023.184139

36.D.-D. Su, **M. Barboiu***, Artificial Water Channels—Progress, Innovations, and Prospects. *CCS Chem*. **2023**, *5*, 279–291. https://doi.org/10.31635/ccschem.022.202202353.

37. B.-G. Rusu,* C. Ursu,* M. Olaru, **M. Barboiu**,* Frequency-Tuned Porous Polyethylene Glycol Films Obtained in Atmospheric-Pressure Dielectric Barrier Discharge (DBD) Plasma. *Appl. Sci.* **2023**, 13, 1785. https://doi.org/10.3390/app13031785.

38. D.-D.Su, L. MA Ali, M. Coste, N. Laroui, Y. Bessin, **M. Barboiu**,* N. Bettache,* S. Ulrich*, Structure-Activity Relationships in Nucleic-Acid-Templated Vectors Based on Peptidic Dynamic Covalent Polymers. *Chem. Eur. J,* **2023**, e202202921. https://doi.org/10.1002/chem.202202921

39. D.-D. Su, V. Gervais, S. Ulrich*, **M. Barboiu*,** Complexation Preferences of Dynamic Constitutional Frameworks as Adaptive Gene Vectors**,** *Chem. Eur. J.* **2023,** e202203062, https://doi.org/10.1002/chem.202203062

40. Y. Zhang, A. van Der Lee, M. Barboiu, Crystallization- andMetal-Driven Selection of Discrete Macrocycles/Cages and Their Metallosupramolecular Polymers from Dynamic Systemic Networks. *Chemistry* **2022**, *4*, 1281–1287. https://doi.org/10.3390/chemistry4040084

41. I.-A. Andrei, **M. Barboiu***, Biomimetic Artificial Proton Channels. *Biomolecules* **2022**, *12*, 1473. https://doi.org/10.3390/biom12101473

42.J. Joseph, Y.-A. Boussouga, M. Di Vincenzo, **M. Barboiu***, A. I. Schäfer* Selectivity of artificial water channel-polyamide composite membranes towards inorganic contaminants. *J. Membrane Sci.* **2022**, 664, 121019 https://doi.org/10.1016/j.memsci.2022.121019

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44.X.-H. Xiong, L. Zhang, W. Wang, N.-X. Zhu, L.-Z. Qin, H.-F. Huang, L.-L. Meng, Y.-Y. Xiong, **M. Barboiu**, D. Fenske, P. Hu, Z.-W. Wei*, Nitro-Decorated Microporous Covalent Organic Framework (TpPa-NO2) for Selective Separation of C_2H_4 from a $C_2H_2/C_2H_4/CO_2$ Mixture and CO_2 Capture, *ACS Appl. Mater. & Interf.,* **2022**, *14*(28) 32105–32111. DOI: 10.1021/acsami.2c08338.

45.**M. Barboiu**,* Les canaux artificiels d'eau : des membranes biomimétiques pour le dessalement, *Actualité Chimique*, **2022**, *470*, 30-34.

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47.Y. Xie, H. Huang, Z. Chen, Z. He, Z. Huang, S. Ning, Y. Fan, M. Barboiu, J.-Y. Shi, D. Wang*, C.Y. Su, Co–Fe–P Nanosheet Arrays as a Highly Synergistic and Efficient Electrocatalyst for Oxygen Evolution Reaction. *Inorg. Chem.* **2022**, 61, 21, 8283–8290. DOI: 10.1021/acs.inorgchem.2c00727.

48.R. Dupuis, **M. Barboiu***, G. Maurin*, Unravelling the pore network and gas dynamics in highly adaptive rubbery organic frameworks, *Chem. Sci.*, **2022**, *13*, 5141-5147.

49.S. David, M. Gheorghiu, S. Daakour, R.-E. Munteanu, C. Polonschii, S. Gáspar, **M. Barboiu,*** E. Gheorghiu,* Real time SPR assessment of the structural changes of adaptive dynamic constitutional frameworks as a new route for sensing, *Materials* **2022**, *15*, 483. https://doi.org/10.3390/ma15020483

50.D. Strilets, S. Cerneaux **M. Barboiu*** Enhanced Desalination Polyamide Membranes Incorporating Pillar[5]arene through in-Situ Aggregation-Interfacial Polymerization-isAGRIP. **Hot paper** *ChemPlusChem*, **2021,** *86*,1602– 1607. DOI: 10.1002/cplu.202100473

51.Y. Zhang, Q. Wang, Z. Wang, D. Zhang, J. Gu, K. Ye, D. Su, Y. Zhang,* J. Chen,* **M. Barboiu**,* Strong, Self-Healing Gelatin Hydrogels Cross-Linked by Double Dynamic Covalent Chemistry. *ChemPlusChem*, **2021,** DOI:10.1002/cplu.202100474.

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53.L.-B. Huang, M. Di Vincenzo, M. Göktuğ Ahunbay, A. van der Lee, D. Cot, S. Cerneaux, G. Maurin*, **M. Barboiu***, Bilayer *versus* polymeric artificial water channel membranes - structural determinants for enhanced filtration performances. *J. Am. Chem. Soc.* **2021**, *143*, 14386-14393. DOI: 10.1021/jacs.1c07425

54. A. Diaconu, T Coeyne, **M. Barboiu***, S. Vincent* Dynamic Constitutional Frameworks as anti-bacterial and antibiofilm agents" *Angew. Chem*. **2021,** *133*, 22679-22686. DOI: 10.1002/ange.202109518; *Angew. Chem. Int. Ed.* **2021**, 60, 22505-22512 DOI: 10.1002/anie.202109518

55. M. Di Vincenzo, A. Tiraferri, V.-E. Musteata, S. Chisca, M. Deleanu, F. Ricceri, D. Cot, S. P. Nunes, **M. Barboiu***, Tunable membranes incorporating artificial water channels for high-performance brackish/low salinity water reverse osmosis desalination. *Proc. Natl. Acad. Sci.,* **2021**, *118(37)*, e2022200118. DOI: 10.1073/pnas.2022200118.

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52. I. Kocsis, A. van der Lee, **Y.-M. Legrand**, M. Barboiu*, Artificial water channels: Structure, Driving forces, Stability, Function, Conférences Balard 2018, Montpellier (France), 18-21 juin 2018

53. **M. Barboiu***, **Keynote Lecture**, Artificial water channels - Membrane and electromembrane processes, MELPRO 2018, Prague (Czech Republic), Mai 13-16, 2018

54. **M. Barboiu***, **Invited Lecture,** Artificial water channels PAPER ID: 2845172, ENVR 54, 255th Division of Environmental Chemistry Novel Membrane-Based Technology for Water Purification & Desalination ACS National Meeting, New Orleans, LA, March 18-22, **2018**.

55. **M. Barboiu***, **Plenary Lecture,** Rubbery organic frameworks-tuning the gas-diffusion through dynameric membranes, PAPER ID: 2845179, PMSE 138255th DIVISION: Division of Polymeric Materials Science and Engineering SESSION: PMSE-North American Membrane Society (NAMS) Joint Symposium on Surface Science of Membranes for Advanced Separations ACS National Meeting, New Orleans, LA, March 18-22, **2018**.

56. D. G. Dumitrescu, W.-x. Feng, Y.-M.Legrand, A.van der Lee, E. Petit, **M. Barboiu***, **Invited Lecture,** Pyrene-box capsules for adaptive encapsulation and structure determination of non-crystalline biogenic compounds, II^{e} Assises Franco Polonaises de Chimie, Centre Scientifique de l'Academie Polonaise des Sciences a Paris, 14-15 Mars **2018**, Paris France.

57. W. Drozdz, Y. Bessij, C. Bouillon, C. Kotras, X.Y. Cao, V. Gervais, S. Riechter, **M. Barboiu***, S. Clement, J. M. Lehn, A. R. Stefankiewicz, S. Ulrich,* **Invited Lecture** Accessing functional Supremolecular Architectures using orthogonal self-assembly processes. II^{e} Assises Franco Polonaises de Chimie, Centre Scientifique de l'Academie Polonaise des Sciences a Paris, 14-15 Mars **2018**, Paris France.

58. **M. Barboiu*, Conference Grand Public,** Le monde des Materiaux Bioinspires. Guandong Science Center, Consulat General de France a Canton, 21 January **2018**, Guangzhou, China.

59. **M. Barboiu*, Invited Lecture,** Artificial Water Channels, GdCh Lecture at KIT, November 30, **2017**, Karlsruhe, Germany**.**

60. **M. Barboiu*, Invited Lecture,** Artificial Water Channels, China-Europe Conference on Research and Application of Membrane, **2017**. 16-18 November **2015**, Weihai, China.

61. **M. Barboiu***, **Invited Lecture**, Dynamic Interactive Hybrid Materials 4th International Symposium on Hybrid Materials and Processes, HYMAP 2017, Busan, Korea, 5-8 November **2017**.

62. **M. Barboiu*, Plenary Lecture,** Artificial Water Channels, Imagine Membranes, September 24-29, 2017, Horta, Azores**.**

63. **M. Barboiu***, **Invited Lecture**, New strategies and materials in CO2 capture, HYperCAP EU-Australian workshop on CO_2 capture. Oslo, Norway, 12-14 September **2017.**

64. **M. Barboiu*, Plenary Lecture,** Artificial Water Channels, 20th Romanian International Conference on Chemistry and Chemical Engineering, RICCCE20, September 6-9, 2017, Poiana Brasov, Romania**.**

65. **M. Barboiu*, Keynote Lecture,** Artificial Water Channels, 11th International Congress on Membranes and Membrane Processes, ICOM2017, 30 July- 5 August, 2017, San Francisco, USA**.**

66. **M. Barboiu*, Keynote Lecture,** Dynamic Constitutional Chemistry of Carbonic Anhydrase Inhibitors. Carbonic Anhydrase Frontiers Symposium, Mai 25-27, **2017**, Montecatini Terme, Italy.

67. **M. Barboiu*, Keynote Lecture,** Artificial Water Channels, Engineering with Membranes, EWM 2017, 26-28 April **2017**, Singapore.

68. **M. Barboiu***, **Keynote Lecture** Highly selective ion/water channels, Invited Lecture, SM7: Emerging Membrane Materials for Sustainable Separations, MRS 2017 Spring Meeting, Pheonix, USA, 15-22 April, **2017**.

69. **M. Barboiu*, Distingushed Invited Lecturer,** From Natural to Bioassisted and Biomimetic Artificial Water/Ion Channel Systems, Frontiers in Chemistry Lecture, Department of Chemistry, Case Western Reserve University, 30 March July **2017**, Cleveland, Ohio, USA.

70. **M. Barboiu*, Plenary Lecture,** Artificial Water Channels, 8th Eastern Mediterranean Chemical Engineering Conference (EMCC8) in Haifa 26 February- 1 March, 2017, Haifa, Israel**.**

71.**M. Barboiu*, Invited Lecture**, Dynamic Constitutional Frameworks, IAS Symposium on Chemistry of Complex Matter, City University, Hong Kong, 14 – 15 November **2016**.

72.**M. Barboiu*, Plenary Lecture**, Rubbery organic frameworks, 34nd *Romanian Chemistry Conference, Calimanesti-Caciulata, Roumanie, 4-7 octobre* **2016***.*

73. **M. Barboiu*, Invited Lecture**, Salt-excluding artificial water channels exhibiting enhanced dipolar water and proton translocation, ECI conferences on Anvanced Membranes Technology VII, Cork, Irlande, 11-16 September, **2016**.

74.**M. Barboiu*, Plenary Lecture,** Dynamic Frameworks-ROFs-Tuning the gaz-diffusion through dynameric membranes. XIIth French-Romanian Polymer Meeting, 05-07 September **2016**, Sophia Antipolis, France

75. **M. Barboiu***, **Plenary Lecture,** From Natural to Bioassisted and Biomimetic Artificial Water/Ion Channel Systems, 5th International Conference on Molecular sensors and Molecular Logic Gates MSMLG 2016, 24-28 July **2016**, Bath, G. Britain.

76. **M. Barboiu***, **Keynote Lecture** Artificial Water Channels. **2016** EMS Summer School, 26 June-01 July **2016**, Bertinoro, Italy

77. I. Kocsis, **M. Barboiu*, Invited Lecture**, Salt Excluding Artificial water Channels in Lipidic Systems, North American Membrane Society NAMS-2016 meeting 21-25 May **2016**, Bellevue, USA.

78. **M. Barboiu***, **Keynote Lecture,** From Natural to Bioassisted and Biomimetic Artificial Water/Ion Channel Systems, AoE Research Symposium, **2015**. 23-24 November **2015**, Hong-Kong.

79. **M. Barboiu***, **Plenary Lecture,** From Natural to Bioassisted and Biomimetic Artificial Water/Ion Channel Systems, Sino-French International Exchangesand Cooperation Forum on Chemical and Pharmaaceutical, **2015**. 19 November **2015**, GDTU, Guangzhou, China.

80. **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.

81. **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**.

82. **M. Barboiu***, **Keynote Lecture,** From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, Euromembrane **2015**, 06-10 September **2015**, Aachen, Germany.

83. **M. Barboiu*, Invited Lecture**, Rubbery Organic Frameworks-ROFs-Tuning the gaz-diffusion through dynameric membranes. Constitutional Dynamic Systems Symposium, 27-28/07/**2015**, Montpellier, France

84. **M. Barboiu***, **Invited Lecture**, Artificial water Channels, Assises Franco Polonaises de Chimie, Academie Polonaise des sciences à Paris, 23-24/07/**2015**, Paris France.

85. **M. Barboiu***, **Keynote Lecture,** Molecular encapsulation of dynamic systems inside the crystalline cages. 10th International Symposium on Macrocyclic & Supramolecular Chemistry (ISMSC-10). 28 June-2 July 2015, Strasbourg, France.

86. **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.

87. **M. Barboiu*, Plenary lecture**, Water a Molecule for life, Academy Lectures, Romanian Academy-Iasi Section, 13 Mars **2015**.

88. **M. Barboiu*, Plenary lecture**, From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, Academy Lectures, Romanian Academy, Magna Aula, 10 Mars **2015**.

89. **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**.

90. **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**.

91. **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.

92. **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.**

93. **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**.

94. **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.

95. **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.

96. **M. Barboiu*, Invited Lecture**, Artificial Water Channel Systems, Colloque Franco-Roumain de Chimie Appliquée-COFrROCA **2014**, Montpellier, France, 15-17 September, **2014**.

97. **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**, Shouzou, China.

98. **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.

99. **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.

100. **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.

101. **M. Barboiu***, **Keynote Lecture**, Dynamic lectin-recognition of multivalent glyconanoplatforms "DYNAMIC NANO- AND GLYCO-SCIENCES" SPRING TRAINING SCHOOL - COST/DYNANO, 7-9- April **2014**, Namur, Belgium.

102. **M. Barboiu***, **Invited Lecture,** Dynamic Constitutional Chemistry of Carbonic Anhydrase Inhibitors. 2nd Carbonic Anhydrase Satellite meeting, October 23-25, **2013**, Napoli, Italy.

103. **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**.

104. **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**.

105. **M. Barboiu*, Invited Lecture,** DYNANO network, DYNANO-GLYCOPHARM Summer School, September30-October 2 **2013**, Biological Research Centre, CSIC, Madrid, Spain.

106. **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.

107. **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.

108. M. Barboiu***, Invited Lecture,** Water in confined media, water channels, 1ere ECOLE PRATIQUE D'ETE LABEX CHEMISYST – POLE CHIMIE BALARD, 1-6 juillet **2013,** Ales, France

109. **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.

110. 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.

111. **M. Barboiu***, Dynamic Constitutional Chemistry of Carbonic Anhydrase Inhibitors. Carbonic Anhydrase Frontiers Symposium, April 18-20, **2013**, Montecatini Terme, Italy.

112. **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

113. **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

114. **M. Barboiu*, Plenary Lecture,** Dynamic Interactive Systems-toward natural selection of functions, "*Supramolecular Symposium: Dynamics and Adaptation*", 4-6 November **2012**, Hangzhou, China.

115. **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**.

116. **M. Barboiu*, Plenary Lecture**, Dynamic Interactive Systems-toward natural selection of functions 32nd *Romanian Chemistry Conference, Calimanesti-Caciulata, Roumanie, 3-2 octobre* **2012**.

117. **M. Barboiu*, Invited Lecture**, Imidazole Quartet - I4 -Water and Proton Dipolar Channels, Joint EMS-NAMS session, Euromembrane-2012 23-27 September, **2012**, London, UK.

118. **M. Barboiu***, **Invited Lecture**, Dynamique de structuration de l'eau en milieu confiné, 1ere ECOLE PRATIQUE D'ETE LABEX CHEMISYST – POLE CHIMIE BALARD, 10-15 septembre **2012**, Montpellier/Saint-Martin de Londres, France.

119. **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.

120. **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**.

121. **M. Barboiu*, Invited Lecture**, Adaptive Responsive Membranes**,** Concepts and applications of stimuli responsive membranes, Summer Workshop, 20-22 June **2012**, San Sebastian, Spain.

122. **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.

123. 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.

124. M. Barboiu*, Invited Lecture, Constitutional dynamic multivalent biomimetic systems, Rencontres en Chimie Organique Biologique, RECOB14, Aussois, 18-22 March **2012**.

125. **M. Barboiu*, Invited Lecture**, Water and Chemistry toward life, Olympiades Regionales des Chimie 2012, 14 Mars 2012, Lycee Mermoz Montpellier.

126. **M Barboiu, Plenary Lecture**, Dynamic Interactive Systems-toward natural selection of functions, Symposium “Open Problems in Systems Chemistry”, Montpellier, 23-25 January **2012**.

127. P. Tyagi, A. Deratani, D. Bouyer, D. Cot, **M. Barboiu***, T.N.T. Phan, D.Bertin, D. Gigme, 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**.

128. **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**.

129. **M. Barboiu***, **Invited lecture**, Dynamic Interactive Systems-toward natural selection of functions, Cost Conference on Systems Chemistry, Strasbourg, France, 15-17 December **2011**.

130. **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**.

131. **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**.

132. M. Barboiu*, Invited Lecture, Dynamic Interactive Systems-toward natural selection of functions, Action Nationale du CNRS: De la necessité d’une recherché exploratoire des nouvelles phases et d’edifices nouveaux, Bordeaux, 5,6 October **2011**.

133. 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.**

134. M Barboiu Keynote Lecture, Systems membranes - dynamic selection in hybrid membrane systems, International Conference on Membranes, ICOM2011, Amsterdam, Netherlands, 24-29 July **2011**.

135. 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**.

136. 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**.

137. **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**.

138. M. Barboiu*, **Invited Lecture**, Dynamic Interactive Systems-toward natural selection of functions, 11eme Journées scientifiques de Marcoule, ICSM Marcoule, 14-17 June **2011**

139. 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**.

140. **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**.

141. **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**.

142. **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**.

143. **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**.

144. **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.

145. **M. Barboiu***, **Invited Lecture**, Cycobutadiene- enigma or reality? Romanian Academy, 21 September **2010**, Bucharest, Romania.

146. **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.

147. 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 Sawer College, New London, USA.

148. 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**.

149. 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**.

150. **M. Barboiu***, **Invited Lecture**, Systems Membranes, Dynamic selection in hybrid membrane systems, Invited Lecture, European Membrane Summer School, Bucharest, Romania, 14-19 June **2010**.

151. **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**.

152. 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**.

153. **M. Barboiu***, **Invited lecture**, Dynamic Interactive Nanoplatforms, KORANET, Korean Scientific cooperation Network with the European Research Area, 1-2 February, Seoul, **2010**.

154. **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**

155. **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**.

156. **M. Barboiu**, **Plenary lecture**, Dynamic constitutional materials, crystallization and sol-gel driven self-selection of functional supramolecular architectures. RICCCE XVI, Sinaia Romania, 9-12 September **2009**.

157. **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**.

158. **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, Universitatszentrum Obergurgl, Innsbruck, Austria, 20-25 June **2009**.

159. **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**.

160. **M. Barboiu***, **Invited Lecture**, Hybrid Biomimetic Membranes…Past, present and below… HYMAP 2008, Busan, Korea, 26-30 October **2008**.

161. **M. Barboiu***, **Invited Lecture**, Constitutional Dynamic systems, Conferinta Diaspora in Cercetarea Stiintifica romaneasca, Bucharest, Romania, 26-30 september **2008**.

162. **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**.

163. **M. Barboiu***, **Invited Lecture**, Hybrid Biomimetic Membranes…Past, present and below… GDR MHOM 2008 on hybrid materials, Biarritz, France 7-9 May, **2008**.

164. **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**.

165. **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**.

166. **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**

167. **M. BARBOIU*, Invited Lecture**, « Beyond a water molecule….**»**.FRENCH-SERBIAN SUMMER SCHOOL, Vrjanka Banja*, Serbie,* 7-13 October **2007***.*

168. **M. BARBOIU*, Invited Lecture**, « Supramolecular and Dynamic Adaptative Hybrid Membranes**»**.IIIrd EURYI Awardees'Network meeting*, Helsinki,* 26-28 September **2007***.*

169. **M. BARBOIU*, Invited Lecture**, « From superstructures to functions: dynamic constitutional chemistry**»**.RICCE XV, Honorary Symposium-Constantin LUCA**,** *Sinaia, Romania,* 19-22 September **2007***.*

170. **M. BARBOIU*, Invited Lecture**, « Supramolecular and Dynamic Adaptative Hybrid Membranes**».** MEDILS-Summer School**,** *Split, Croatia,* 12-18 august **2007***.*

171. **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***.*

172. **M. BARBOIU*, Invited Lecture**, « Dynamic Constitutional Supramolecular Membranes**».** *Marie Curie Wrokshop New Materials for Membranes GKSS research Center Geesthacht* , Germany 4-6 June **2007***.*

173. **M. BARBOIU*, Invited Lecture**, « Dynamic Supramolecular Hybrid Membranes**».** *MRS-2007 Spring Meeting,* San-Francisco, USA , 9-13 April **2007***.*

174. **M. BARBOIU***, **Invited Lecture**, « Dynamic supramolecular materials», the Ist 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*.*

175. **M. Barboiu***, Dynamic supramolecular Devices, **Conférence plénaire,** *International Symposium of Analytical Chemistry and Envronement Protection***,** 20 octobre **2006**, Bucharest, Romania.

176. **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**.

177. **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**

178. **M. Barboiu***, **Invited Lecture**, Hybrid Supramolecular Dynamic Membranes, *International Conference on Biosensing and Biodynamics, From Basics to Applications*, Bucharest, Romania, May 18-21 **2006**.

179. 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**.

180. **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***.*

181. **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***.*

182. **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***.*

183. **M. BARBOIU*, Invited Lecture**, « Constitutional Dynamic Self-Amplification in the Functional Imine Systems**».** *CERC3-Young ChemistsWorkshop, European Science Foundation, Baden-Baden, Germany , 3-5 mai* **2005***.*

184. **M. BARBOIU*, Plenary Lecture** « Constitutional Dynamic Libraries**»** *14th Romanian International Conference on Chemistry and Chemical Engeneering, 22-24 Septembre 2005, Bucharest, Romania.*

185. **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***.*

186. **M. BARBOIU*, Plenary Lecture** « Dynamic Adaptative Materials for Separation and Biomimetic Nanosystems **»** *National Romanian Conference, 8-12 octobre 2004, Calimanesti, Romania.*

187. **M. BARBOIU*,** A. Ayral, Conférence plénaire 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.*

188. **M. BARBOIU*, Invited Lecture**,« Modulation of coiling/uncoiling molecular motion**»** *The Third Younger European Chemists Conference" ESRF Grenoble, France 26-29 August 2003.*

189. **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.*

190. **M. BARBOIU* Invited Lecture**, « Membranes Hybrides dispositifs à trasport facilité»**.** *Colloque NanoHybrides 1 GDR-CNRS 2486 Bordeaux, France 14-15 juin 2004.*

191. **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.*

192. **M. BARBOIU* Invited Lecture**, « Membranes hybrides à transport facilité**»** *Colloque NanoHybrides 0 GDR-CNRS 2486 Carry le Rouet, France 2-6 juin 2003.*

193. **M. Barboiu*, Invited Lecture**, « Nanomatériaux, applications aux technologies à membrane » *National Chemistry Conference, Calimanesti-Caciulata, Roumanie, 23-25 octobre 2002.*

194. 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.*

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

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

Invited Seminars- 89

1. **M. Barboiu***, **Invited Seminar,** Artificial Water **Channels** toward biomimetic membranes for desalination, Prof. Xing Yang, Department of Chemical Engineering KU Leuven, Belgium. 26 February **2025**.

2. **M. Barboiu***, **Invited Seminar,** Artificial Water **Channels** toward biomimetic membranes for desalination, Prof. Christelle Yacou, Université des Antilles, pole Guadeloupe, Gloaudeloupe, France. 18 December **2025**.

3. **M. Barboiu***, **Invited Seminar,** Artificial Water **Channels** toward biomimetic membranes for desalination, Prof. Lang Chao, South China University of Technology- SCUT, Guangzhou, China. 12 November **2024**.

4. **M. Barboiu***, **Invited Seminar,** Artificial Water Channels Prof. Yan Zhang, School of Pharmaceutical Sciences. Jiangnan University, Wuxi, China. 25 April **2024**.

5. **M. Barboiu***, **Invited Seminar,** Artificial Water Channels-Nanopore webseminar, Prof. Ytao Long, Nanjing University, China, 15 July 2024. 2020Nanoporemeeting - Weekly Meeting

6. **M. Barboiu***, **Invited Seminar,** Artificial Water Channels GTR-IGER-VBL Seminar, Prof. Eiji Yashima, Nagoya University, Nagoya, Japan. 05 July **2023**.

7. **M. Barboiu***, **Invited Seminar,** Artificial Water Channels-Supramolecular Chemistry Seminar, Prof. Tomoki Ogoshi, Kyoto University, Kyoto, Japan, 07 July **2023**.

8. **M. Barboiu***, **Invited Webinar,** ITM-International Webminars 2021: Artificial Water Channels-Toward Biomimetric Membranes for Desalination, University of Calabria ITM, 28 July **2021**

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

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

11. **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.

12. **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.

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

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

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

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

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

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

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

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

21. **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**.

22. **M. Barboiu***, **Invited Lecture,** Aritficial Water Channels-toward highly selective membranes for desalination KAUST University, Prof. Nivine M. Khachab, KAUST, Saudi Arabia 22 November **2018**.

23. **M. Barboiu***, **Invited Lecture,** Aritficial Water Channels-toward highly selective membranes for desalination University of Pays Basque, BC Materials Prof. Senentxu Lanceros, Bilbao. Spain. 15 November **2018**.

24. **M. Barboiu*,** Encapsulation *versus* self-aggregation toward highly selective artificial K^+-Channels, Sun Yat Sen University, Doctoral School, 30 October **2018**, Guangzhou, China.

25. **M. Barboiu***, Invited Lecture**,** Aritficial Water Channels-toward highly selective membranes for desalination Fudan University, Prof. Jun Li Hou. Shanghai, China. 19 september **2018**.

26. **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**.

27. **M. Barboiu***, **Invited seminar**, Molecular encapsulation, Prof. Ion Grosu, University Babes Bolyai, Cluj Napoca, Romania, 04 July **2018**.

28. **M. Barboiu***, **Invited seminar**, Artificial Water Channels, UNIVERSITÉ TOULOUSE III - Paul Sabatier, Laboratoire des IMRCP, 09 Avril **2018**.

29.**M. Barboiu***, **Invited seminar**, Dynameric networks for biomolecular recognition, Beijing Normal University (Host: Prof. Qing-Zheng Yang, Beijing, 05 January, **2018**.

30.**M. Barboiu***, **Invited seminar**, Dynameric networks for biomolecular recognition, Tsinghua University (Host: Prof. Huaping Xu), Beijing, 04 January, 2018.

31.**M. Barboiu*, Invited seminar**, Artificial Water Channels, Institute of Chemistry, Chinese Academy of Sciences, Host：Prof. De-Xian Wang, Beijing, 03 January, 2018.

32.**M. Barboiu***, **Invited seminar**, Artifcial Water Channels, Universite de Lorraine, Nancy, France, Prof. Andreea Pasc, 29 Novembre **2017**.

33. **M. Barboiu*, Invited seminar**, Artifcial Water Channels, European Institute for Chemistry and Biology, Bordeaux, France, Dr. Ivan Huc, 17 June **2017**.

34. **M. Barboiu*, Invited Lecture,** Artificial Water Channel Systems, University of Barcelone, Prof. Eliseo Ruiz, 11 Mai **2017**, Barcelona, Spain.

35. **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.**

36. **M. Barboiu***, **Invited seminar**, Molecular encapsulation of dynamic systems inside the crystalline cages, Shanghai University, Prof. Hegui Gong, 05 January **2017**.

37. **M. Barboiu***, Invited Lecture**, Dynamic Constitutional Frameworks,** Fudan University, Prof. Jun Li Hou. Shanghai, China. 04 January **2017**.

38. **M. Barboiu***, **Invited Lecture,** Artificial Water Channels, Sun Yat Sen University, Doctoral School, 10 November **2016**, Guangzhou, China.

39. **M. Barboiu***, **Invited Lecture,** Artificial Water Channel Systems, SUSTC University, Prof. Wei Jiang, 31 October **2016**, Shenzen, China.

40. **M. Barboiu***, **Invited seminar**, Molecular encapsulation of dynamic systems inside the crystalline cages, Institut des Sciences et Inginerie Suairespramoleculaires, Strasbourg, France Prof. Jean-Marie Lehn, 08 December **2015**.

41. **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.

42. **M. Barboiu***, **Invited Lecture,** NSA Research Overview, Sun Yat Sen University, Prof. Chuyong Su, 18 November **2015**, Guangzhou, China.

43. **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.

44. **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.**

45. **M. Barboiu***, **Invited Lecture,** From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, Penn State Universsity, State College, PA, Prof. Manish Kumar, USA 08 June **2015.**

46. **M. Barboiu***, **Invited Lecture,** From Natural to Bioassisted and Biomimetic Artificial Water Channel Systems, Temple Universsity, Philadelphia, PA, Prof. Marc Ilies, USA 10 June **2015.**

47. **M. Barboiu***, **Invited Lecture,** G-Quadruplex-what else…, Maryland University, Washington DC, DC, Prof. Jeff Davis, USA 12 June **2015.**

48. **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**.

49. **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**.

50. **M. Barboiu***, Invited seminar, Dynamic Interactive Systems-toward natural selection of functions, Prof. Kim Il, Busan University Korea, 9 November **2014**.

51. **M. Barboiu*** Invited seminar, Artificial Water Channels, Prof. Yong Soo Kang, FTC (Fusion Technology Center) Hanyang University, Seoul, Korea, 16 october **2014**.

52. Y.M. Legrand, **M. Barboiu***, Invited seminar, Dynamic Interactive Systems-toward natural selection of functions, Prof. Ion Grosu, University Babes Bolyai, Cluj Napoca, Romania, 15 Mai **2014**.

53. **M. Barboiu*** Invited seminar, Glyconanoparticules-sugar protein interaction at nano level, Prof. Ion Grosu, University Babes Bolyai, Cluj Napoca, Romania, 15 Mai **2014**.

54. **M. Barboiu***, Invited lecture, Self-assembled biomimetic channels and materials, Cours de chimie de recyclage, ICSM, Marcoule 16 Janvier **2014**.

55. **M. Barboiu*,** Invited lecture, Dynamic Constitutional Systems, Department of Chemistry, Ecole Polythecnique Palaiseau, France, 29 Novenbre **2013**.

56. **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**.

57. **M. Barboiu*,** Invited plenary lecture, Dynamic constitutional Materials, Lehn Institute for Advanced Materials, Sun Yat Sen University, Guangzhou, China, 29 Octobre **2013**.

58. **M. Barboiu***, Invited seminar, Dynamic Interactive Systems-toward natural selection of functions, Prof. Carole Arnal-Herault, ENSIC Nancy, France, 17 Mai **2013**.

59. 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**.

60. **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**.

61. **M. Barboiu***, Invited seminar, Dynamic Interactive Systems-toward natural selection of functions, Samsung Advanced Institute of Technology- SAIT Suwon, Korea, 24 october **2011**.

62. **M. Barboiu***, Invited seminar, Dynamic Interactive Systems-toward natural selection of functions, Korean Institute for Energy Research, Daejon, Korea, 25 october **2011**.

63. **M. Barboiu***, Invited seminar, Dynamic Interactive Systems-toward natural selection of functions, Prof. Ion Grosu, University Babes Bolyai, Cluj Napoca, Romania, 6 september **2011**.

64. **M. Barboiu***, D. Quemener, Invited lecture, Project STREAM, *Institut of Macromolecular Chemistry, Petru Poni, Iasi, Roumanie, 24 janvier 2011.*

65. **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.

66. **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.

67. **M. Barboiu*,** E. Mahon**,** Invited Lecture, **Dr. Teodor Aastrup,** Dynamic materials for sensing applications, ATTANA AB, 14 october 2009

68. **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.*

69. **M. Barboiu*,** Invited lecture, **Prof. Gheorghe Nechifor,** *Dynamic and hybrid polymers for constitutional recognition, University Politehnica of Bucharest, Romania, 5 Mai 2009.*

70. **M. Barboiu*,** Invited lecture, **Prof. Gheorghe Nechifor,** *Dynamic chemical devices, University Politehnica of Bucharest, Romania, 6 Mai 2009.*

71. **M. BARBOIU*** Invited lecture, **Prof Christine Mousty**, Dynamic hybrid materials for constitutional selective membranes*, Université Blaise Pascal, Clermont Ferrand, France 3 December 2008.*

72. **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.*

73. **M. BARBOIU*** Invited lecture, **Prof Yong Soo Kang***, Dynamic and hybrid polymers for constitutional recognition, Hanyang University, Seoul, Korea, 4 November 2008.*

74. **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.*

75. **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.*

76. **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.*

77. **M. BARBOIU*,** Invited lecture, **Prof. Jonathan Nitszche**. « SUPRACOMBIMAT » methodology toward functional materials *Université de Geneve, Geneve, Swiss, 30 mars 2006.*

78. **M. BARBOIU*,** Invited lecture, **Prof. Carles Miravitlles**. Constitutional dynamic self-amplification in the dynamic constitutinal libraries, *Institut de Ciencia de Materials de Barcelona , Barcelona, Spain, 5 mai 2006.*

79. **M. BARBOIU*,** Invited lecture, **Prof. Bogdan Simionescu**. « Membranes hybrides adaptatifs» *Institut Petru Poni, Iasi, Roumanie, 16 septembre 2005..*

80. **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.*

81. **M. BARBOIU*,** Invited lecture, **Prof. Armand Lattes**. « Matériaux hybrides et dispositifs dynamiques » *Université Paul Sabatier Toulouse, France, 1 Mars 2005.*

82. **M. BARBOIU*** , Invited lecture, **Prof. Stéphane Vincent**. « Matériaux hybrides dynamiques » *Facultés Universitaires Notre Dames de la Paix, Namur, Belgium, 30 Mai 2005.*

83. **M. BARBOIU*,** Invited lecture, **Dr. Pierre Aimar** « Membranes hybrides dispositifs à transport facilité » *Université Paul Sabatier Toulouse, France, 10 Juin 2004.*

84. **M. BARBOIU*,** Invited lecture, **Prof. Constantin Luca** « Nanomatériaux, applications aux technologies à membrane » *Université Politehnica de Bucarest, France, 25 Mai 2004.*

85. **M. BARBOIU*,** Invited lecture, **Prof. Claudiu Supuran**. « Modulation of coiling/uncoiling molecular motion » *Université de Florence, Italie, 18 Mai 2003.*

86. **M. BARBOIU*,** Invited lecture, **Prof. Luca Prodi** « Dispositifs dynamiques fonctionnels » *Université de Bologne, Italie, 18 Mai 2003.*

87. **M. BARBOIU*, T. Thami** Invited lecture, Matériaux à reconnaissance moléculaire et auto-assemblés » *CEA Marcoule, France, Mai 2003.*

88. **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.*

89. **M. Barboiu*,** Invited lecture, **Prof. Jean-Marie Lehn,** « Nano-mechanical devices ». *Collège de France, Université Louis Pasteur, Strasbourg, 06 juillet 2001.*

Communications -142

1. **M. Barboiu***, Artificial Water Channels - toward biomimetic membranes for desalination and water reuse. World Filtration Congress 14-WFC 14, , July 1-4, **2025**, Bordeaux, France.

2. **M. Barboiu***, Pillararene water channels - structural determinants for enhanced selective water translocation, 19th International Symposium on Macrocyclic and Supramolecular Chemistry 2025 (ISMSC2025), and WPI-NanoLSI symposium from May 25-30, 2025, Kyoto, Japan.

3. **M. Barboiu***, Water-Pore Flow Permeation through Multivalent Artificial Water Channels, North American Membrane Society NAMS 2025 meeting 17-21st May **2025**, Nashville, MS, USA.

4. **M. Barboiu***, Large scale industrial biomimetic membranes for efficient Angstrom-scale molecular separations, North American Membrane Society NAMS 2025 meeting 17-21st May **2025**, Nashville, MS, USA.

5. **M. Barboiu***, Pillararene water channels - structural determinants for enhanced filtration performances in bilayer and polymeric membrane. Symposium: Molecular Recognition & Self-Assembly, Division of Organic Chemistry ACS Spring 2025, March 23-27, **2025**, San Diego, USA.

6. **M. Barboiu***, Artificial Water Channels - toward biomimetic membranes for desalination and water reuse. Symposium: Applications & Implications of Nanomaterials in the Environment, Division of Environmental Chemistry ACS Spring 2025, March 23-27, **2025**, San Diego, USA.

7. **M. Barboiu***, A Tunable membranes incorporating artificial water channels for high-performance reverse osmosis. Symposium: Transport in Polymer Membranes for Sustainability and Decarbonization, Division PMSE ACS Spring 2025, March 23-27, **2025**, San Diego, USA.

8. **M. Barboiu***, Artificial Water Channels- toward Biomimetic Membranes for Desalination. North American Membrane Society NAMS 2024 meeting 11-15th May **2024**, Santa Fe, NM, USA

9. **M. Barboiu***, Rubbery Organic Frameworks-Tuning the Gaz-Diffusion through Dynameric Membranes, Symposium: Novel Applications of Polymeric Materials, Division of Polymeric Materials Science and Engineering, ACS Spring 2024, March 17-21, **2024**, New Orleans, USA.

10. **M. Barboiu***, Artificial water channels: Toward biomimetic membranes for water purification. Symposium: Water Purification Technologies for Sustainable Development: Decentralized Treatment, Wastewater Reuse, and High Efficiency Processes, Division of Environmental Chemistry ACS Spring 2024, March 17-21, **2024**, New Orleans, USA.

11. **M. Barboiu***, Hydroxy-channels – adaptive pathways for selective water cluster permeation, ACS Fall 2023 August 13-17, **2023**. San Francisco, USA.

12. **M. Barboiu***, Self-Assembled Artificial Water Channels—Structural Determinants of for Enhanced Membranes Filtration Performances, ACS Fall 2023 August 13-17, **2023**. San Francisco, USA,

13. **M. Barboiu***, Artificial Water Channels- toward Biomimetic Membranes for Desalination. 13th International Congress on Membranes and Membrane Processes, ICOM2023, 9-14 July **2023**, Chiba, Japan.

14. **M. Barboiu***, Artificial Water Channels- toward Biomimetic Membranes for Desalination. Membrane Distillation and Innovating Membrane Operations in Desalination and Water Reuse-md-sorrento2023. April 23rd - 26th, 2023. Sorrento (NA), Italy.

15. **M. Barboiu***, Tunable membranes incorporating artificial water channels for high-performance water reverse osmosis desalination, NAMS 2023 meeting; Biomimetic Membranes Symposium; 15-17th May **2023**, Tuscaloosa, USA

16. O. Samhari, **M. Barboiu***, Development of Nanofiltration membranes incorporating Artificial Water Channels. NAMS 2023 meeting; Biomimetic Membranes Symposium; 15-17th May **2023**, Tuscaloosa, USA.

17. **M. Barboiu***, Rubbery Organic Frameworks-Tuning the Gaz-Diffusion through Dynameric Membranes, Symposium: SB07.07: Multifunctional Polymer Networks, MRS Spring meeting, April 13, **2023**, San Francisco, USA,

18. **M. Barboiu***, Self-Assembled Artificial Water Channels—Structural Determinants of for Enhanced Membranes Filtration Performances Symposium: SF05.09: Application of Assembled Materials I, MRS Spring meeting April 13, **2023**, San Francisco, USA,

19. I. M. Andrei, D. Strilets, T. Ogoshi, **M. Barboiu**, Self-assembled artificial water and proton channels based on combinatorial self-assembly of tubular Pillar[5]arenes 10th Edition of the Journées Méditerranéennes Des Jeunes Chercheurs, 13-14 Octobre **2022**, Nice, France

20. **M. Barboiu***, Pillararene water channels - structural determinants for enhanced filtration performances in bilayer and polymeric membranes, Calixarene -Calix 2022, New Orleans, USA, 14-18 July **2022**.

21. **M. Barboiu***, Artificial Water Channels toward biomimetic membranes for desalination, 16th International Symposium on Macrocyclic and Supramolecular Chemistry-ISMSC 2022. Eugene, Oregon USA, 19-24 June, **2022**

22. R. Dupuis, G. Maurin, M. Barboiu Rubbery organic frameworks – ROF membranes for enhanced selective CO_2 capture, French MOFs, COFs and Porous Polymers Conference. Montpellier, France 8-9 June, **2022**.

23. O. Samhari, **M. Barboiu***, Enhanced Desalination NF membranes incorporating Artifical Water channels. The Second International Symposium on Nanomaterials and Membrane Science for Water, Energy and Environment Desalination and reuse face to water scarcity, Tangier - Morocco, June 1st &02nd **2022**.

24. D.-D. Su, M. Barboiu, S. Ulrich, Arginine-rich dynamic covalent polymers for multivalent DNA recognition and siRNA delivery. Journées de Chimie Supramoleculaire, JCS2022 ENS Lyon, 19-20 May **2022**.

25. **M. Barboiu***, Artificial Water Channels toward biomimetic membranes for desalination, 2022 NAMS meeting; Biomimetic Membranes Symposium, Tempe, Arizona USA, 14-18 Mai, **2022**

26. **M. Barboiu***, Artificial Water Channels toward biomimetic membranes for desalination, MRS Spring meeting, Nanoscale mass transport through 2D and 1D Nanomaterials Symposium, Honolulu USA, 8-13 Mai, **2022**

27. **M. Barboiu***, Artificial Water Channels toward biomimetic membranes for desalination, ACS Spring meeting, Advanced (Nano)Materials, Membranes & Manufacturing for Water Treatment and Reuse Symposium, ENVR division, San Diego USA, 20-24 Mars, **2022**

28. R. Dupuis, G. Maurin, **M. Barboiu**, Atomistic modelling of the formation of dynamic molecular polymers, Euromembrane 2021 Copenhagen, November 29-December 2, **2021**, Danmark**.**

29. D. Su, S. Ulrich, **M. Barboiu**, Polyamine dynamic framerworks as activators of carbonic anhydrases, 9th Mediterranean Young researchers' days, Montpellier, France, 28-29 October **2021**.

30.**M. Barboiu***, Rubbery organic frameworks-facilitated transport through dynameric membranes, 2nd French MOFs, COFs and Porous Polymers Conference, Online, May 26-27, **2021**.

*31.*S. Daakour, **M. Barboiu***, Dynamer-liposome dynamic system for drug delivery, Conference Balard 2021, 15-18 June 2021, Montpellier, France.

32. 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.**

33. 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.**

34. 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.**

35. **M. Barboiu*** Artificial Water Channels – deconvolution of natural Aquaporins through synthetic design. IUPAC 2019, Paris, July 5-12, 2019.

36. **M. Barboiu*** Self-assembled biomimetic water and k+ channels-toward natural selection of functions. IUPAC 2019, Paris, July 5-12, 2019.

37. R. Yu, S Li*, **M. Barboiu***, Synthesis and characterization of dynamic CMCS-based hydrogel, IUPAC 2019, Paris, July 5-12, 2019.

38. **M. Barboiu***, Calix-box capsules for adaptive encapsulation and structure determination, 15th International Conference on Calixarenes-Calix 2019, Cassis, June 10-14, **2019**.

39. **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**.

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