



# Marcin Lindner, PhD

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Residence: Warsaw (Poland)

Head of the TEAM XB

## Professional Profile

- Experience in a small team management,
- Servicing foreign (non-Polish) clients,
- Experience in developing of multi-step, asymmetric, and heterocycles syntheses,
- Experience in NMR, ESI-(ToF)-HRMS, LCMS, UV-Vis, IR, GC, column and flash chromatography purification

## Key skills :

- Practical knowledge of multi-step synthesis project management ,
- Rational design of functional molecules
- Planning and execution of budget,
- Purification of organic compounds,
- The ability of public speaking and making presentations,
- Advanced skills in MS Office,
- Analytical, research and problem-solving skills,
- Ability to learn fast,
- Driving license cat. B.

## Professional Experience

- 11/2019 - Assistant Professor at the Institute of Organic Chemistry Polish Academy of Science (Warsaw, Poland), Head of Team XB**
- PI at two grants: Sonata 14, Lider XI;
  - Rational design of BN-doped polycyclic aromatic hydrocarbons (PAHs),
  - Synthesis of novel class of heterocoronenes,
  - Synthesis of novel emitters towards TADF OLEDs,
  - Investigation of structure/properties relationship in terms of photoactivity
- 02/2019 – 10/2019 Postdoc at the Institute of Organic Chemistry Polish Academy of Science (Warsaw, Poland), Team III (Prof. Dr. Karol Grela)**
- New catalytic systems towards selective semihydrogenation of alkynes,
  - writing a publication.
- 10/2017 – 01/2019 Researcher at the Institute of Organic Chemistry Polish Academy of Science (Warsaw, Poland) Team VIII (Prof. Dr. Janusz Jurczak)**
- Synthesis of *unclosed cryptands*,
  - Design and the synthesis of novel photo-responded rigid molecular receptors for anions,
  - Writing a publication.
- 01/2017 - 09/2017 Synthesis Specialist III, (Cracow/Poznan, Poland) Selvita SA, Contract Chemistry Department**
- Multi-step synthesis of organic compounds including asymmetric synthesis in a small and large scale,
  - Cost estimation and delineation of synthetic strategies for requested molecules,
  - Supervision of the project via weekly written and oral reports.
- 09/2012 - 12/2016 PhD Researcher Student, Karlsruhe Institute of Technology (Germany), Institute of Nanotechnology**
- Synthesis of functional organic molecules, structural analysis and their self-assembly process on the gold surface,
  - Synthesis and the analysis of novel bis-functionalized 3D tetraphenylmethane-based

## Foreign languages:

- English – advanced (written and spoken),
- German – basic, communicative level

09/2010

**Internship at Glaxo Smith Kline(Poznań, Poland),  
Quality Control Department, Phase and Chemicals Lab**

- mobile phases and chemicals preparation support of the quality control department manifested by buffer and solution preparation according ISO 9001 requirements

## Education

**10/2012 – 12.2016 University of Basel (Switzerland, “magna cum laude”)  
Faculty: Science, Department of Chemistry**

**Level of education:** PhD Degree

**Supervision:** Prof. Dr. Marcel Mayor

*“Tailor - Made Tetraphenylmethanes: From Surface  
Decoration to 3D Organic Polymers”*

**10/2010 - 06/2012 Adam Mickiewicz University in Poznań (Poland)**

**Faculty: Chemistry**

**Specialization:** Material Chemistry

**Level of education:** Master Degree

**Supervision:** Prof. Dr. Jacek Gawroński

**10/2007 - 06/2010 Adam Mickiewicz University in Poznań (Poland)**

**Faculty: Chemistry**

**Specialization:** Synthetic and Analytical Chemistry

**Level of education:** Bachelor Degree

**Supervision:** Prof. Dr. Bogdan Marciniec

## Publications

- 1) *Rigid multipodal platforms for metal surfaces,*
- 2) *Importance of the anchor group position (para vs meta) in tetraphenylmethane tripods: synthesis and self-assembly features,*
- 3) *Molecular Graph Paper,*
- 4) *Investigation of the Geometrical Arrangement and Single Molecule Charge Transport in Self-Assembled Monolayers of Molecular Towers Based on Tetraphenylmethane Tripod,*
- 5) *Chirality of 20-membered unclosed cryptand: Macroring distortion via lariat arm modification,*
- 6) *Facile, Stereocontrolled Synthetic Route towards Bis-functionalised Pyrrolizidines*
- 7) *An indirect synthetic approach toward conformationally constrained 20-membered unclosed cryptands via late-stage installation of intraannular substituent*

- 1) Valášek, M., Lindner, M., Mayor, M., *Beilstein. J. Nanotechnol.* **2016**, 7, 374 (**IF = 3.13**)
- 2) Lindner, M., Valášek, M., Homberg, J., Gerhard, L., Fuhr, O., Wulfhchel, W., Waechter, T., Zharnikov, M., Kolivoška, V., Pospíšil, L., Mészáros, G., Hromadová, M., Mayor, M., *Chem. Eur. J.* **2016**, 22, 13218 (**IF = 5.16**)
- 3) Lindner, M., Valášek, M., Mayor, M., Frauhammer, T., Wulfhchel, W., Gerhard, L. *Angew. Chem. Int. Ed.* **2017**, 56, 8290 (**IF = 12.24**)
- 4) Sebechlebská, T., Šebera J., Kolivoška, V., Lindner, M., Gasior, J., Mészáros, G., Valášek, M., Mayor, M., Hromadová, M. *Electrochimica Acta*, **2017**, 258, 1191 (**IF = 4.85**)
- 5) Jurczak, J., Sobczuk, A. Dąbrowa, K., Lindner, M., Niedbała, P., Stępnik, P. *Chirality*, **2018**, 30, 219 (**IF = 1.95**)
- 6) Lindner, M., Krasiński, A., Jurczak, J. *Synthesis*, **2018**, 50, 4295 (**IF = 2.81**)
- 7) Jurczak, J., Sobczuk, A. Dąbrowa, K., Lindner, M., Niedbała, P. *J. Org. Chem.* **2018**, 83, 13560 (**IF = 4.85**)
- 8) Homberg, J. Lindner, M., Edelmann, K. Frauhammer, Valášek, M., T. Mayor, M., Wulfhchel, W., Gerhard, L. *Nanoscale* **2019**, 11, 9015 (**IF = 7.23**)

- 9) Probabilistic mapping of single molecule junction configurations as a tool to achieve the desired geometry of asymmetric tripod molecules
  - 10) Tuning contact conductance of anchoring groups in single molecule junctions by molecular design
  - 11) Selective recognition of chloride by a 24-membered unclosed cryptand confined with a hydrophobic methylenepyrene substituent;
  - 12) Tuning Anion Binding Properties of 22-Membered Unclosed Cryptands by Structural Modification of the Lariat Arm;
  - 13) Addressing a lattice of rotatable molecular dipoles with the electric field of an STM tip
  - 14) Application of Iridium-Ferrocene complex for semihydrogenation of alkynes. From excellent E-selectivity to limitless functional group tolerance,
  - 15) Sulfur-mediated 24-membered unclosed cryptand confined with a hydrophobic methylene pyrene used as a fluorescent sensor of oxidants;
- 9) Kolivoška, V., Šebera J., Sebechlebská, T., Lindner, M., Gasior, J., Mészáros, G., Mayor, M., Valášek, M., Hromadová, M. *Chem Commun.* **2019**, 55, 3351 (**IF = 6.23**)
  - 10) Šebera J., Lindner, M., Gasior, J., Mészáros, G., Fuhr O., Mayor, M., Valášek, M., Kolivoška, V., Hromadová, M. *Nanoscale* **2019**, 11, 12959. (**IF = 7.23**);
  - 11) Dąbrowa, K., Lindner, M., Wasitek, S. Jurczak, *Eur. J.Org. Chem.* **2020**, 29, 4528 - 4531 (**IF = 2.89**)
  - 12) Dąbrowa, K., Niedbała, P., Pawlak, P., Lindner, M., Ignaciak, W. Jurczak, *ACS Omega*, **2020**, 45, 29601–29608 (**IF = 2.87**)
  - 13) Frauhammer, T., Gerhhard, L., Edelmann, K., Lindner, M., Valášek, M., Mayor, M., Wulfhekel, W., *Phys. Chem. Chem. Phys.* **2021**, just accepted

### Manuscripts submitted/under revision

- 14) Lindner, M., Kusy, R., Wagner, J., Kubas, A., Grela, K, **2021**, manuscript under preparation
- 15) Dąbrowa, K., Lindner, M., Tyszka-Gumkowska, Jurczak, manuscript under preparation **2021**,

### Awarded Projects and External Reviews

- “Cyclazines and their reactivity - new structural motifs in molecular engineering”, *Miniatura* **2**, 2018/02/X/ST5/02189, 2019, (1 year research task funded by NCN), Budget: **12 000 €**
- “Modular, polycyclic aromatic hydrocarbons based on cyclazines: new materials for optoelectronic applications”, *Sonata* **14**, 2018/31/D/ST5/00426, 01.11 2019 (3 year project funded by National Centre of Science - NCN), Budget: **217 540 €**
- “Synthesis of novel class of organic emitters for TADF OLED materials embracing curved nanographene fragment”, *Lider XI* LIDER/21/0077/L-11/19/NCBR/2020, 01.01. 2020 (3 year project funded by National Centre of Research and Development - NCBiR), Budget: **325 967 €**
- Project reviews for the Science Fund of the Republic of Serbia in the frame of PROMIS competition 2019/2020

### Conference Meetings, Poster Presentations, Awards

- Scholarship Financed by European Union, in the frame of European Social Fund (2010-2012)
- Scholarship of the President of the University (2011-2012)
- Scholarship of Mother Universities (2010-2011)
- Scholarship of Polish Prime Minister (2006-2007)
  
- *The Third International Symposium on the Synthesis and Application of Curved Organic  $\pi$ -Molecules & Materials*, Oxford (Great Britain), 2018 (poster presentation),
- *Chemistry Beyond the Nature*, Poznań (Poland), **Oral Presentation** (Tailor-made tetraphenylmethanes as molecular tripods),
- *13<sup>th</sup> European Conference on Molecular Electronics*, Strasbourg (France) 2015 (poster presentation, **POSTER AWARDED** by the Journal of Material Chemistry C),
- *7<sup>th</sup> International Conference of Molecular Electronics*, Strasbourg (France) 2014 (poster presentation),
- Surface-Confined Synthesis of Nanostructures*, Winter School, Baden-Baden (Germany) 2013 (poster presentation),

## Hobbies:

- Being a basketball referee,
- Sport cars,
- Gym and fitness,

- School of Physical Organic Chemistry "Self-organization and interaction behind", Przesieka (Poland) 2012 (poster presentation), Marie Skłodowska-Curie Symposium on the Foundations of Physical Chemistry, Warsaw (Poland) 2012,
- Participation in organizing of International Symposium on Homogeneous Catalysis (ISHC-17), Poznań, Poland, July 4th-9th, 2010.

## Scientific Collaborations

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- Prof. Dr. Wulf Wulfhekel, Dr. Lukas Gerhard - Karlsruhe Institute of Technology, Institute of Nanotechnology, Institute of Physics Germany, Surface Physics
- Prof. Dr. Michael Zharnikov - University of Heidelberg, Institute of Physical Chemistry, Germany, Surface Spectroscopy
- Dr Magdalena Hromadová - Czech Academy of Sciences, J. Herovský Institute of Physical Chemistry Prague, Czech Republic, Electrochemical measurements, STM-BJ studies
- Dr hab. Przemysław Data – Silesian University of Technology, Gliwice, photophysical analysis of aromatic compounds and fabricated OLED devices)
- Dr hab. Adam Kubas – Institute of Physical Chemistry, Polish Academy of Sciences, Warsaw (Advanced quantum calculations)
- Dr hab. Szymon Godlewski – Jagellonian University, Department of Physics, Cracow, on-surface synthesis of curved nanographenes

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