Curriculum vitae

PERSONAL INFORMATION

Family and First name: **Rybakov Andrey**

ORCID: 0000-0002-9924-3576
Scopus Author ID: 57210452927
ResearcherID: W-6960-2019

Date of birth: October 30, 1997 Nationality: Russian

EDUCATION

2021	**Master in Applied Mathematics and Physics** (*with Honours*) at Moscow Institute of Physics and Technology. Dolgoprudny, Russia. Supervisor: Prof. Andrew Palii.
2019	**BSc in Applied Mathematics and Physics** (*with Honours*) at Moscow Institute of Physics and Technology. Dolgoprudny, Russia. Supervisor: Prof. Andrew Palii.

CURRENT POSITION

2021 - present	**Pre-doctoral Fellow** at ICMol, University of Valencia, Spain.

PREVIOUS POSITIONS

2019 - 2021	**Graduate Researcher** at Institute of Problems of Chemical Physics. Laboratory of Molecular Magnetic Nanomaterials. Chernogolovka, Russia.
2018 - 2019	**Undergraduate Researcher** at Institute of Problems of Chemical Physics. Laboratory of Molecular Magnetic Nanomaterials. Chernogolovka, Russia.

FELLOWSHIPS AND AWARDS

2021 - present	**GRISOLIA pre-doctoral fellowship**, Valencian Regional Government, Spain.
2019	**Scholarship named after N.N. Semenov** granted by Moscow Institute of Physics and Technology, Russia
2016	**Excellence Scholarship** granted by «Foundation for the development of innovative education in the field of natural sciences», Russia.

CONFERENCES AND SCHOOLS

18 - 22 July 2022	**4th International Advanced School on Magnonics** - MAGNETOFON. Porto, Portugal.
20 - 24 June 2022	**«Frontiers in Quantum Materials and Devices» conference**. Presented a poster «Magnon straintronics in the 2D van der Waals ferromagnet CrSBr». Valencia, Spain.
16 - 20 May 2022	**Wannier 2022 Summer School**. Trieste, Italy.
5 - 8 April 2022	**European Conference on Molecular Spintronics**. Presented a poster «Magnon straintronics in the 2D van der Waals ferromagnet CrSBr». Valencia, Spain.
23 - 29 November 2020	**63 All-Russian Scientific Conference in Moscow Institute of Physics and Technology**. Presented an oral communication «Double Exchange Clusters as a New Class of Cells for Quantum Cellular Automata with Additional Functions». Dolgoprudny, Russia.
18 - 24 November 2019	**62 All-Russian Scientific Conference in Moscow Institute of Physics and Technology**. Presented an oral communication «Comparison of Theoretical Models of Cells for Molecular Quantum Cellular Automata Based on Mixed Valence Molecules». Dolgoprudny, Russia.

PUBLICATIONS

- Esteras, D. L., Rybakov, A., Ruiz, A. M., & Baldovì, J. J. *Magnon straintronics in the 2D van der Waals ferromagnet CrSBr from first-principles.* **arXiv:2206.09277, 2022**.
- Boix-Constant, C., Mañas-Valero, S., Ruiz, A. M., Rybakov, A., Konieczny, K. A., Pillet, S., Baldovì, J. J. & Coronado, E. (2022). Probing the spin dimensionality in single-layer CrSBr van der Waals heterostructures by magneto-transport measurements. **arXiv:2204.04095, 2022**.
- Palii A., Juan Modesto Clemente-Juan, Aldoshin S., Korchagin D., Rybakov A., Shmuel Zilberg, Tsukerblat B. *Mixed-Valence Magnetic Molecular Cell for Quantum Cellular Automata: Prospects of Designing Multifunctional Devices through Exploration of Double Exchange.* **J. Phys. Chem. C, 2020**, 124, 46, 25602–25614.
- Palii A., Juan Modesto Clemente-Juan, Rybakov A., Aldoshin S., Tsukerblat B. *Exploration of the double exchange in quantum cellular automata: proposal for a new class of cells.* **Chem. Commun., 2020**, 56, 10682-10685.
- Palii A., Shmuel Zilberg, Rybakov A., Tsukerblat B. *Double-Dimeric Versus Tetrameric Cells for Quantum Cellular Automata: a Semiempirical Approach to Evaluation of Cell–Cell Responses Combined with Quantum-Chemical Modeling of Molecular Structures.* **J. Phys. Chem. C, 2019**, 123, 36, 22614–22623.
- Palii A., Rybakov A., Aldoshin S., Tsukerblat B. *Semiclassical versus quantum-mechanical vibronic approach in the analysis of the functional characteristics of molecular quantum cellular automata.* **Phys. Chem. Chem. Phys., 2019**, 21, 16751-16761.
- Tsukerblat B., Palii A., Rybakov A. *Quantum cellular automata: theoretical study of bistable cells for molecular computing.* **Magn. Reson. Solids, 2019** 21, 19414.