

MICHAL PTÁČEK

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* 1997 in Pilsen, Czechia

Education

since 2023 **PhD in Biophysics, Chemical and Macromolecular Physics**
Faculty of Mathematics and Physics, Charles University, Prague, Czechia

Topic: Nonlinear optical spectroscopy of electron-phonon coupling
in small molecules

Supervisor: Tomáš Mančal

2020–2023 **MSc in Theoretical Biophysics and Chemical Physics**
Faculty of Mathematics and Physics, Charles University, Prague, Czechia

Thesis: Theory of ultrafast relaxation and internal conversion
in chlorophyll molecules

Supervisor: Tomáš Mančal

transcript



2017–2020 **BSc in Molecular Biology and Biochemistry of Organisms**
Faculty of Science, Charles University, Prague, Czechia

Thesis: Excitation energy transfer in photosynthetic reaction centres

Supervisor: Tomáš Mančal

transcript




IT Skills & Programming Experience

- Programming: Python (development of packages and apps with GUI); T_EX (typesetting, customisation of packages and B_IB_TE_X styles); Bash; Astro framework, HTML, JavaScript, TypeScript (web development, scripting); Visual Basic (MS Excel macros); R (statistics); beginner with C++, C#
- Computer graphics: Blender, Inkscape, DaVinci Resolve, Gimp, CAD, etc.

Language Skills

	listening	reading	speaking	writing
Czech		native language		
English	C1	C1	C1	C1
French	A2	B1	A1	A2
German	A1	A1	A1	A1

Certificates

- **Cambridge C1 Advanced (CAE)** 
grade C, overall score of 187
exam date: October 26, 2019

Grants, Scholarships & Awards

2026 National Science Foundation & University of Texas at Austin
a scholarship to attend the Texas Quantum Winter School in Wimberley, TX, USA











2025 Grant Agency of Charles University
grant No. 432225 – Nonadiabatic Energy Dissipation in Large Molecular Complexes: Theory and Spectral Signatures

Work Experience

- since 2022 Charles University;
Researcher at the Molecular Open Quantum Systems group of Dr. T. Mančal
Programmer in Python, editor of study materials (especially educational videos)
- since 2017 Charles University (since 2021), Czech University of Life Sciences (2017–2021);
Member of the Biology Olympiad organising team for the Czech Republic
(international competition for secondary school students)
Chief typesetter and graphics editor, author of educational and examination texts

Selected Projects & Academic Texts

 MichalPt

- 2025 Web development: research group website (mama-group.cz)
A development of a new website for our research group. Created using Astro JavaScript framework. 
- 2023 Overleaf–ReadCube Papers integration
A TamperMonkey script for integrating ReadCube Papers citation software support into Overleaf (online T_EX editor) UI. 
- 2023 Python package `track_vis`
Easy-to-use set of tools for graphical processing of GPS data from e.g. sport trackers, supporting custom maps via MapBox API. 
- 2022 Exam project: Hermitian and non-Hermitian theory of scattering and resonances
Derivation, implementation of equations from scratch, and benchmarking using Python language and various accelerators.  
- 2022 Exam project: CI method for solving He atom using iterative approach
Derivation and implementation of equations from scratch using Python language. 
- 2022 Exam project: *Ab initio* molecular dynamics
Implementation of equations using Python language and various quantum chemical libraries.  
- 2021 Python package `colour_of_molecule`
A tool-set for analysing excited states' calculations from quantum chemical software.  

Interest & Hobbies

- Computers and technology, programming
- Art and architecture, photography, graphic arts & printmaking, music
- Botany and algology

References

Dr Tomáš Mančal, *Associate Professor*

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personal web: mama-group.cz/mancal

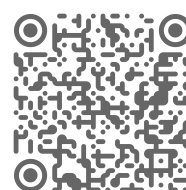
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Prof Jaroslav Burda, *Professor*

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personal web: physics.mff.cuni.cz/kchfo/burda/

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