

Curriculum Vitae

Personal data:

Name: **Veronika Zelenková (Horká)**
Date of Birth: November 24, 1977 in Prague, Czech Republic
Address: Karenova 28, 150 00, Prague, Czech Republic
Civil status: married, 2 children
Nationality: Czech
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Experience:

2013 - Post-doctoral position - Department of Chemistry of Ions and Clusters,
Molecular and Cluster Dynamics Group J. Heyrovsky Institute of Physical
Chemistry of the ASCR,

2005-2011 Post-doctoral position - Department of Physical Chemistry, ETH Zürich,
Switzerland
Supervisor: Prof. Dr. Dr. h. c. Martin Quack

2009 Teaching assistant in advanced kinetic exercises; Department of Physical
Chemistry, ETH Zürich, Switzerland

2008 Teaching assistant in thermodynamic exercises; Department of Physical
Chemistry, ETH Zürich, Switzerland

2008 Teaching assistant in kinetic exercises; Department of Physical Chemistry,
ETH Zürich, Switzerland

2005-2007 Teaching assistant in laboratory courses of spectroscopy and research projects;
Department of Physical Chemistry, ETH Zürich, Switzerland

2003 Research fellowship - University of New Brunswick, Canada
(4 months)
Supervisor: Prof. Li-Hong Xu

2001 Research fellowship - University of Lille, France, Project Barrande
(1 month)

Education:

- 2001-2005 **PhD studies** – Department of Physical and Macromolecular Chemistry, Faculty of Natural Sciences, Charles University in Prague and Department of Physical Chemistry and J. Heyrovsky Institute of Physical Chemistry, Academy of Sciences of the Czech Republic
PhD thesis- "*Application of Diode Lasers in Spectroscopy* "
Supervisors: Prof. RNDr. Svatopluk Civiš, CSc.
- 1999-2001 **Master studies** - Department of Analytical Chemistry, Faculty of Science, Charles University in Prague
Thesis - "*Electrochemic Oxidation Derivatives of Acridine and Benzoxazine*"
Supervisors: Doc. RNDr. Ivan Němec, RNDr. Karel Nesměrák, Ph.D.
- 1996-1999 **Bachelor in Chemistry** - Department of Chemistry, Faculty of Natural Sciences, Charles University in Prague

Work related experience:

General: Chemistry, Physical chemistry, Analytical chemistry, Vacuum technology, spectroscopy.

Spectroscopy: Jet spectroscopy, Molecular beam, IR spectroscopy, FTIR-spectroscopy, Laser-diode spectroscopy, Spectroscopy in the discharge, Optoacoustic detection, Emission spectroscopy, Raman spectroscopy, UV/Vis spectroscopy.

Analysis of: rotational-vibrational levels, vibrational bands, nuclear spin at very low temperature, intramolecular vibrational energy redistribution (IVR).

Electrochemical methods: cyclic voltammetry, coulometry, preparative methods.

Awards:

Ioannes Marcus Marci Spectroscopic Society, Award for the best work in spectroscopy (young scientist award till 35 years) (2005)

Teaching:

- 2009 Teaching assistant: Advanced kinetic (PC); Department of Physical Chemistry, ETH Zürich, Switzerland

- 2008 Teaching assistant: Thermodynamics (PC I); Department of Physical Chemistry, ETH Zürich, Switzerland
- 2008 Teaching assistant: Reaction kinetics (PC II); Department of Physical Chemistry, ETH Zürich, Switzerland
- 2005-2007 Teaching assistant in laboratory courses of spectroscopy (PCP II) and research projects; Department of Physical Chemistry, ETH Zürich, Switzerland

Language skills:

English - Cambridge First Certificate

German - Goethe certificate B2

Czech - native speaker

Published papers:

1. High-resolution FTIR and Diode Laser Spectroscopy of Supersonic Jets
Marcel Snels, Veronika Horká-Zelenková, Hans Hollenstein and Martin Quack
In *Handbook of High-resolution Spectroscopy*, ed. by Martin Quack and Frédéric Merkt, 1021-1067 (2011).
2. Dispersion of Light and Heavy Pollutants in Urban Scale Models: CO₂ Laser Photoacoustic Studies
Z. Zelinger, M. Střížík, P. Kubát, S. Civiš, E. Grigorová, R. Janečková, O. Zavila, V. Nevrlý, L. Herecová, S. Bailleux, V. Horká, M. Ferus, J. Skřínský, M. Kozubková, S. Drábková, and Z. Jaňour: *Applied Spectroscopy*, **63** (4), 430-436 (2009).
3. Analysis of the CH-chromophore spectra and dynamics in dideutero-methyl iodide CHD₂I
Veronika Horká, Martin Quack and Martin Willeke: *Molecular Physics*, **106**, 1303-1316 (2008).
4. Laser Diode Photoacoustic Detection in the Infrared and Near Infrared Spectral Ranges
V. Horká, S. Civiš, Li-Hong Xu, and M.R. Lees: *Analyst*, **130** (8), 1148-1154 (2005).
5. Room Temperature Diode Laser Spectroscopy Near 2.3 μm
S. Civiš, V. Horká, J. Cihelka, T. Šimeček, E. Hulicius, J. Oswald, and J. Pangrác: *Appl. Phys. B -Lasers And Optics*, **81**(6), 857-861, (2005).
6. GaSb Based Lasers Operating Near 2.3 μm for Absorption Spectroscopy
S. Civiš, V. Horká, T. Šimeček, E. Hulicius, J. Pangrác, J. Oswald, O. Petříček, Y. Rouillard, C. Alibert, and R. Werner: *Spectrochimica Acta Part A -Molecular And Biomolecular Spectroscopy*, **61** (13, 14), 3066-3069, (2005).

7. The Infrared Spectrum of CN in Its Ground Electronic State
Veronika Horká, Svatopluk Civiš, Vladimír Špirko, and Kentarou Kawaguchi:
Collect. Czech. Chem. Commun., **69**, 73-89 (2004).
8. InAsSb/InAsSbP Current-Tunable Laser With Narrow Spectral Line Width
S. Civiš, P. Kubát, Z. Zelinger, V. Horká, A.N. Imenkov, N.M. Kolchanova, and
Y.P.Yakovlev: *Appl. Phys. B*, **76**, 633-637 (2003).
9. Non-Aqueous Capillary Electrophoretic Separation and Detection of 6*H*-pyrimido[2,1-*a*]
M. Pumera, V. Horká, and K. Nesměrák: *J. Sep. Sci.* **25**, 443-446 (2002).
10. Structure-Property Relationships of Thioacridines; Their Electrochemical Oxidation as a
Model of Metabolite Degradation
K. Nesměrák, I. Němec, M. Štícha, I. Němcová and V. Horká: *Anal. Lett.* **35**, 1617-1629,
(2002).

Conferences:

Oral contributions:

Veronika Horká-Zelenková, Martin Quack, Georg Seyfang: **Nuclear spin relaxation in partially deuterated methane in the expansion of a molecular supersonic jet**, Fall Meeting and General Assembly of the Swiss Chemical Society, ETH Zürich, Switzerland, September 2010.

Veronika Horká, Sieghard Albert, Manfred Caviezel, Martin Quack, Georg Seyfang and Achim Sieben: **Combined High Resolution FTIR and Supersonic Jet-diode Laser Spectroscopic Study of PFCl₂**: Rovibrational Analysis of the PF-stretching Mode ν_1 , The 20th International Conference on High Resolution Molecular Spectroscopy Prague, Czech Republic, September 2–6, 2008.

Veronika Horká, Martin Quack, Martin Willeke: **Vibrational Spectra and Ab-initio Calculations for the study of intramolecular vibrational redistribution in the CH-cromophore in CHD₂I**, **International Symposium on Molecular Spectroscopy** 62th Meeting, Columbus, Ohio, June 2007.

Hobby:

Travelling, hiking, skiing, badminton...