

Prof. Dr. Igor F. Shishkov

Prof. Dr. Leonid S. Khaikin

Prof. Dr. Natalja Vogt

Dr. Lyudmila V. Khristenko

Dr. N. M. Karasev

Dr. I. N. Kolesnikova

Dr. I. I. Marochkin

Dr. A. N. Rykov

Dr. E. P. Altova

N. F. Moiseeva

A. L. Vilkova

Department of Chemistry

Moscow State University

119992 GSP-2, Leninskiye gori 1, Moscow

Russia

Telephone: (+7) (95)939-26-37
 Telefax: (+7) (95)932-88-46
 E-Mail: IFShishkov@phys.chem.msu.ru
 khrist@phys.chem.msu.ru
 Iskhaikine@rambler.ru

Homepage:

C₂H₅NO₂ O ₂ NCH ₂ CH ₂ OH	2-Nitroethanol Intramolecular dynamics and equilibrium structure <i>D. M. Kovtun, I. V. Kochikov, A. A. Ivanov, and Yu. I. Tarasov</i> 15-th Eur. Symp. on GED, Germany, 2013, Abstracts, P. 24
C₃H₇NO₂ CH ₃ CH(NH ₂)COOH	α-Alanine Molecular structure by GED and quantum chemical calculation. <i>E. P. Altova, A. N. Rykov, L. V. Khristenko, and I. F. Shishkov</i> 15-th Eur. Symp. on GED, Germany, 2013, Abstracts, P. 43
C₃H₈N₄ (CH ₃) ₂ NCH ₂ N ₃	N-Azidomethyl-N,N-dimethylamine Molecular structure from GED data and quantum chemical calculations. <i>E. O. Altova, O. G. Nabiev, N. M. Karasev, R. G. Kostyanovsky, L. S. Khaikin, and I. F. Shishkov</i> Mendeleev Commun., 23 (2013), 166
C₄H₃FN₂O₂	5-Fluorouracil Molecular structure by ED and QC <i>D. N. Ksenafontov, N. Vogt, and A. N. Rykov</i> Work in progress
C₄H₄N₂O₂ C ₄ H ₄ N ₂ O ₂	Uracil Equilibrium molecular structure from GED data and coupled-cluster calculations. <i>N. Vogt, L. S. Khaikin, O. E. Grikina, and A. N. Rykov</i> J. Mol. Struct., 1050 (2013), 114
C₄H₄O₃	Dihydro-2,5-furandione (succinic anhydride) Molecular structure and conformations by ED and QC <i>N. Vogt, E. P. Altova, D. N. Ksenafontov, and A. N. Rykov</i> Work in progress
C₄H₄O₅	Oxobutanedioic acid Molecular structure and conformations by ED and QC <i>L. S. Khaikin, O. E. Grikina, and A. N. Rykov</i> Work in progress
C₄H₉NO₂	4-Aminobutanoic acid Molecular structure and conformations by ED and QC

$\text{H}_2\text{N}(\text{CH}_2)_3\text{COOH}$	<i>D. N. Ksenafontov, N. F. Moiseeva, A. N. Rykov, I. F. Shishkov, and H. Oberhammer</i> Work in progress
$\text{C}_4\text{H}_9\text{NSeSi}$ $(\text{CH}_3)_3\text{Si-N=C=Se}$	Trimethylsilyl isoselenocyanate Calculated regularities for structure of pseudohalides X_3YNCZ ($\text{X} = \text{H, CH}_3$; $\text{Y} = \text{C, Si}$; $\text{Z} = \text{O, S, Se}$) and equilibrium molecular structure of $(\text{CH}_3)_3\text{SiNCSe}$ by GED <i>L. S. Khaikin, O. E. Grikina, I. V. Kochikov, and N. F. Stepanov</i> Russ. J. Phys. Chem. A, 88 (2014), 663, in press
$\text{C}_5\text{H}_6\text{N}_2\text{O}_2$ $\text{CH}_3\text{-C}_4\text{H}_3\text{N}_2\text{O}_2$	1-Methyluracil $r_a, r_e^{\text{se}}, r_e$ (best ab initio) structure by ED and quantum chemical calculations <i>N. Vogt, I. I. Marochkin, and O. V. Dorofeeva</i> J. Phys. Chem. A, 117 (2013), 11374
$\text{C}_5\text{H}_6\text{O}_2$	Methoxyfuran Structure of by GED and quantum-chemical calculations <i>I. F. Shishkov</i> 15-th Eur. Symp. on GED, Germany, 2013, Abstracts, P.9
$\text{C}_5\text{H}_9\text{NSe}$ $(\text{CH}_3)_3\text{CNCSe}$	tert-Butyl isoselenocyanate Molecular structure by ED and QC <i>L. S. Khaikin, O. E. Grikina, and I. Hargittai</i> Work in progress
$\text{C}_5\text{H}_{10}\text{N}_2\text{O}$ $(\text{CH}_3)_2\text{NCH}(\text{CN})\text{OCH}_3$	(Cyanomethoxy)(dimethylamino)methane Molecular structure from GED data and quantum chemical calculations <i>E. P. Altova, R. G. Kostyanovsky, and I. F. Shishkov</i> Russ. J. Phys. Chem. A, 88 (2014), 673, in press
$\text{C}_6\text{H}_3\text{N}_3\text{O}_6$ $\text{C}_6\text{H}_3(\text{NO}_2)_3$	1,3,5-Trinitrobenzene Some peculiarities of analysis for GED data with consideration of equivalence of large amplitude motion coordinates <i>I. V. Kochikov, L. S. Khaikin, D. S. Tikhonov, and O. E. Grikina</i> 15-th Eur. Symp. on GED, Germany, 2013, Abstracts, P. 55
$\text{C}_6\text{H}_5\text{NO}_2$ $\text{C}_5\text{H}_4\text{NCOOH}$	Pyridine-3-carboxylic acid (nicotinic acid) Molecular structure and conformations by ED and QC <i>I. I. Marochkin, N. Vogt, and A. N. Rykov</i> Work in progress
$\text{C}_6\text{H}_5\text{NO}_2$ $\text{C}_5\text{H}_4\text{NCOOH}$	Pyridine-2-carboxylic acid (picolinic acid) Molecular structure and conformations by ED and QC <i>I. N. Kolesnikova, N. Vogt, A. N. Rykov, and J. Vogt</i> Work in progress
$\text{C}_6\text{H}_8\text{N}_2\text{O}_2$	1-Methylthymine r_a, r_{se}, r_e (best ab initio) structure by ED and quantum chemical calculations <i>N. Vogt, I. I. Marochkin, I. F. Shishkov, and A. N. Rykov</i> Manuscript in preparation
$\text{C}_6\text{H}_{12}\text{N}_2$ $(\text{CH}_2)_6\text{N}_4$	Urotropine Interpreting the vibrational spectra of $-d_0$ and $-d_{12}$ isotopomers by scaling the quantum-chemical force field <i>L. S. Khaikin, O. E. Grikina, I. V. Kochikov, and N. F. Stepanov</i> Russ. J. Phys. Chem. A, 88 (2014), 450, in press
$\text{C}_6\text{H}_{12}\text{N}_2$ $(\text{CH}_2)_6\text{N}_4$	Urotropine Equilibrium molecular structure by GED using data from quantum chemistry and vibrational spectroscopy <i>L. S. Khaikin, O. E. Grikina, N. M. Karasev, D. M. Kovtun, and I. V. Kochikov</i> Russ. J. Phys. Chem. A, 88 (2014), 658, in press

C₇H₄F₄O C ₆ H ₄ (OCF ₃)F	m-Fluoro(trifluoromethoxy)benzene Conformational composition by vibrational spectroscopy <i>L. V. Khristenko, V. M. Senyavin, B. V. Lokshin, A. L. Vilkova, and I. F. Shishkov</i> Struct. Chem., (2013), in press
C₇H₄F₄O C ₆ H ₄ (OCF ₃)F	o-Fluoro(trifluoromethoxy)benzene Determination of conformational composition by vibrational spectroscopy <i>L. V. Khristenko, V. M. Senyavin, B. V. Lokshin, A. L. Vilkova, and I. F. Shishkov</i> Struct. Chem., (2013), in press
C₇H₇NO C ₆ H ₅ -NH-CHO	Formanilide Molecular structure and relative stability of trans and cis conformers from GED data and quantum chemical calculations <i>I. I. Marochkin and O. V. Dorofeeva</i> Struct. Chem., 24 (2013), 233
C₈H₁₁NO₃	Noradrenaline Structure by GED and quantum-chemical calculations <i>I. F. Shishkov</i> 15-th Eur. Symp. on GED, Germany, 2013, Abstracts, P.9
C₈H₁₁NO₃	l-1-(3,4-Dihydroxyphenyl)-2-aminoethanol (noradrenaline) Molecular structure and conformations by ED and QC <i>M. A. Abaev, A. N. Rykov, M. V. Popik, and I. F. Shishkov</i> Manuscript in preparation
C₉H₃F₉ C ₆ H ₃ (CF ₃) ₃	1,3,5-Tris(trifluoromethyl)benzene Molecular structure and conformation by ED and QC <i>O. V. Dorofeeva, I. N. Kolesnikova, I. F. Shishkov, and H. Oberhammer</i> Manuscript in preparation
C₉H₁₃NO₃	(R)-4-(1-Hydroxy-2-(methylamino)ethyl)benzene-1,2-diol (adrenaline) Molecular structure and conformations by ED and QC <i>E. P. Altova, N. Vogt, A. N. Rykov, M. V. Popik, and I. F. Shishkov</i> Work in progress
C₁₁H₈O₂ CH ₃ -C ₁₀ H ₅ O ₂	Vitamin K3 (menadione) Quantum chemical calculations and electron diffraction study of equilibrium molecular structure (preliminary results) <i>L. S. Khaikin, D. S. Tikhonov, O. E. Grikina, A. N. Rykov, and N. F. Stepanov</i> Russ. J. Phys. Chem. A, 88 (2014), in press
C₁₂H₁₄N₂O₂ C ₆ H ₅ -C ₄ H ₅ ON-CH ₂ CONH ₂	Carphedon (Phenylpiracetam) Molecular structure from GED data and quantum chemical calculations <i>D. N. Ksenafontov, N. F. Moiseeva, A. N. Rykov, I. F. Shishkov, and H. Oberhammer</i> Struct. Chem., 24 (2013), 171
	Development of iterative methods Iterative methods for calculations of extreme eigenvalues of large symmetric matrices <i>A. V. Mitin</i> Mathematical Modelling and Geometry, submitted
	Basis sets for atoms Ga through Kr Polarization functions for the modified m6-31G basis sets for atoms Ga through Kr <i>A. V. Mitin</i> J. Comput. Chem., 34 (2013), 2014
	Methyl derivatives of uracil

Molecular structure study of some methyl derivatives of uracil by electron diffraction method and high-level ab initio calculations.

I. I. Marochkin, N. Vogt, A. N. Rykov, O. V. Dorofeeva, J. Vogt, and I. F. Shishkov

15-th Eur. Symp. on GED, Germany, 2013, Abstracts, P. 59