

Publication List

January 2018

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Publications Summary (03.01.2018):

Patents/copyright: **7**. Total published papers: **97**; Total citations: **1668** (Scopus); h-index: **31** (Google Scholar), **27** (Scopus).

Papers in the last 5 years (2013-2017): **35**, including: papers as a PI: **20**; equal contribution with collaborators: **6**; leading role of collaborators: **5**; reviews: **4**.

Patents/invention disclosures/copyright in the last 5 years (5):

1. Anton Kozhinov, **Yury O. Tsybin**, Konstantin Nagornov. International Patent Application n° PCT/IB2016/051887 filed on April 1st, 2016. Title: "Data acquisition apparatus and methods for mass spectrometry". Applicant: Spectroswiss Sàrl.
2. **Yury O. Tsybin**, Anton Kozhinov, Konstantin Nagornov. International Patent Application n° PCT/IB2015/052708 filed on April 14, 2015. Title: "Device and Method for Ion Cyclotron Resonance Mass Spectrometry". In the name of: Ecole Polytechnique Federale de Lausanne (EPFL).
3. Kozhinov Anton N.; **Tsybin Yury O.** An electrostatic ion trap for mass spectrometry. Provisional patent application PCT/IB2014/064793 (from 24.09.2014)
4. Kozhinov Anton N.; **Tsybin Yury O.** Phase intersection point method for improving resolution in Orbitrap FTMS. Patent application PCT/IB2014/060709 (from 14.04.2014)
5. Kozhinov Anton N.; **Tsybin Yury O.** An iterative method for mass spectra recalibration via empirical estimation of the mass calibration function for Fourier transform mass spectrometry. EPFL Software Disclosure, 2015.

Patents/invention disclosures/copyright older than 5 years (2):

1. **Tsybin, Yury O.**; Hendrickson, Christopher L.; Quinn, John P.; Marshall, Alan G. Method and device for generation of low energy electrons in an ion cyclotron resonance trap. US invention disclosure (Florida State University). 2005.
2. **Tsybin, Youri O.**; Baykut, Gokhan. Method and device for irradiating ions in an ion cyclotron resonance trap with photons and electrons. U.S. Pat. Appl. Publ. (2003), 17 pp. US 2003183760 A1 20031002

Articles as a PI in the last 5 years (20):

1. Nagornov Konstantin O., Kozhinov Anton N., **Tsybin Yury O.** Cyclotron phase-coherent ion spatial dispersion in a non-quadratic trapping potential is responsible for FT-ICR MS at the cyclotron frequency. *Journal of the American Society for Mass Spectrometry, in print*
2. Fornelli Luca, Ayoub Daniel, Aizikov Konstantin, Liu, Damoc Eugen, Pevzner Pavel, Makarov Alexander, Beck Alain, and **Tsybin Yury O.** Top-down analysis of immunoglobulin G isotypes 1 and 2 with electron transfer dissociation on a high-field Orbitrap mass spectrometer. *Journal of Proteomics*, 2017, 159, 67–76
3. Nagornov Konstantin O., Kozhinov Anton N., **Tsybin Yury O.** Fourier transform ion cyclotron resonance mass spectrometry at the cyclotron frequency. *Journal of the American Society for Mass Spectrometry*, 2017, 28, 768–780
4. Vorobyev Aleksey, Zhurov Konstantin O., Laskay Unige A., **Tsybin Yury O.** On the use of electron capture rate constants to describe electron capture dissociation mass spectrometry of peptides. *European Journal of Mass Spectrometry*, 2015, 21 (3) 451–458
5. Nagornov Konstantin O., Kozhinov Anton N., Tsybin Oleg Y., **Tsybin Yury O.** Ion trap with narrow aperture detection electrodes for Fourier transform ion cyclotron resonance mass spectrometry. *Journal of the American Society for Mass Spectrometry*, 2015, 26, 741–751
6. Zhurov Konstantin O., Menin Laure, Di Franco Thomas, **Tsybin Yury O.** A functional group approach for prediction of APPI response of organic synthetic targets. *Journal of the American Society for Mass Spectrometry*, 2015, 26, 1221–1231
7. Srzentic Kristina, Fornelli Luca, Laskay Unige A., Monod Michel, Beck Alain, Ayoub Daniel, **Tsybin Yury O.** Advantages of extended bottom-up proteomics using Sap9 for analysis of monoclonal antibodies. *Analytical Chemistry*, 2014, 86, 9945–9953

8. Laskay Unige A., Srzentic Kristina, Monod Michel, **Tsybin Yury O.** Extended Bottom-Up Proteomics with Secreted Aspartic Protease Sap9. *Journal of Proteomics*, 2014, 110, 20-31
9. Nagornov Konstantin O., Gorshkov Mikhail V., Kozhinov Anton N., **Tsybin Yury O.** High-Resolution Fourier Transform Ion Cyclotron Resonance Mass Spectrometry at Increased Scan Rate for Biomolecular Analysis. *Analytical Chemistry*, 2014, 86, 9020–9028
10. Fornelli Luca, Ayoub Daniel, Aizikov Konstantin, Beck Alain, **Tsybin Yury O.** Middle-down analysis of monoclonal antibodies with electron transfer dissociation Orbitrap FTMS. *Analytical Chemistry* (2014) 86, 3005-3012
11. Aushev Tagir, Kozhinov Anton N., **Tsybin Yury O.** Least-squares fitting of time-domain signals in Fourier transform mass spectrometry. *Journal of the American Society for Mass Spectrometry* (2014) 25(7) 1263-1273
12. Zhurov Konstantin O., Kozhinov Anton N., Fornelli Luca, **Tsybin Yury O.** Distinguishing analyte from noise components in mass spectra of complex samples: where to cut the noise? *Analytical Chemistry*, (2014) 86(7) 3308–3316
13. Wodrich Matthew D., Zhurov Konstantin O., Corminboeuf Clemence, **Tsybin Yury O.** On the viability of heterolytic peptide N-Calpha bond cleavage in electron capture and transfer dissociation mass spectrometry. *Journal of Physical Chemistry B*, 2014, 118 (11) 2985-2992
14. Zhurov Konstantin O., Wodrich Matthew D., Corminboeuf Clemence, **Tsybin Yury O.** Ping-pong protons: how hydrogen bonds facilitate heterolytic peptide bond cleavage in peptide radical cations. *Journal of Physical Chemistry B*, 2014, 118 (10) 2628-2637
15. Laskay Unige A., Lobas Anna, Srzentic Kristina, Gorshkov Mikhail V., **Tsybin Yury O.** Proteome digestion specificity analysis for rational design of extended bottom-up and middle-down proteomics experiments. *Journal of Proteome Research* (2013) 12, 5558-5569 Note: collaborators provided technical assistance in bioinformatics
16. Fornelli Luca, Parra Julien, Hartmer Ralf, Stoermer Carsten, Lubeck Markus, **Tsybin Yury O.** Top-down analysis of 30–80 kDa proteins by electron transfer dissociation time-of-flight mass spectrometry. *Analytical Bioanalytical Chemistry* (2013) 26, 8505-8514 Note: industrial collaborators provided technical assistance in experimental work
17. Kozhinov Anton N., Zhurov Konstantin O., **Tsybin Yury O.** Iterative method for mass spectra recalibration via empirical estimation of mass calibration function for Fourier transform mass spectrometry-based proteomics. *Analytical Chemistry* (2013) 85, 6437-6445
18. Zhurov Konstantin O., Kozhinov Anton N., **Tsybin Yury O.** Hexagonal class representation for fingerprinting and facile comparison of proteomic samples. *Analytical Chemistry* (2013), 85, 5311-5315
19. Zhurov Konstantin O., Kozhinov Anton N., **Tsybin Yury O.** Evaluation of high-field Orbitrap Fourier transform mass spectrometer for proteomics. *Energy and Fuels* (2013) 2974-2983
20. Laskay Unige A., Srzentic Kristina, Fornelli Luca, Upir Oxana, Kozhinov Anton N., Monod Michel, **Tsybin Yury O.** Practical considerations for improving the productivity of mass spectrometry-based proteomics. *Chimia* (2013) 67 (4): 244-249 Note: collaborator provided Sap9 protease and consulting on sample preparation

Articles as a co-PI with the equal participation of collaborators in the last 5 years (6):

1. Driver, Joshua A., Nagornov, Konstantin O., Kozhinov, Anton N., **Tsybin, Yury O.**, Kharchenko, Andriy, Amster, I. Jonathan. Multiparticle simulations of quadrupolar ion detection in an ion cyclotron resonance cell with four narrow aperture detection electrodes, *Journal of the American Society for Mass Spectrometry*, in print
2. Kai Schuhmann, Kristina Srzentić, Konstantin O. Nagornov, Henrik Thomas, Theresia Gutmann, Ünal Coskun, **Yury O. Tsybin**, Andrej Shevchenko. Monitoring Membrane Lipidome Turnover by Metabolic 15N Labeling and Shotgun Ultra-High-Resolution Orbitrap Fourier Transform Mass Spectrometry. *Analytical Chemistry*, 2017, 89 (23), 12857–12865
3. Gasilova, Natalia; Srzentic, Kristina; Qiao, Liang; Liu, Baohong; **Tsybin, Yury O.**; Girault, Hubert. On-chip mesoporous functionalized magnetic microspheres for protein sequencing by extended bottom-up mass spectrometry. *Analytical Chemistry*, 2016, 88 (3), 1775-1784
4. Kilgour David P.A., Nagornov Konstantin O., Kozhinov Anton N., Zhurov Konstantin O., **Tsybin Yury O.** Producing absorption mode FT-ICR mass spectra with non-quadratic phase correction functions. *Rapid Commun. Mass Spectrom.*, 2015, 29, 1087-1093
5. Tsybin Oleg Y., **Tsybin Yury O.** Time-dependent frequency of ion motion in Fourier transform mass spectrometry. *Int. J. Mass Spectrom.* 2015, 376, 75–84
6. Laskay Unige A., Garino C., **Tsybin Yury O.** Salassa Luca, Cassini Angela. Gold finger formation studied by high-resolution mass spectrometry and *in silico* methods. *Chem. Commun.*, 2015, 51, 1612

Articles with the leading role of collaborators in the last 5 years (5):

1. Kai Schuhmann, Henrik Thomas, Jacobo Miranda Ackerman, Konstantin O. Nagornov, **Yury O. Tsybin**, Andrej Shevchenko Intensity-independent noise filtering in FTMS and FT MS/MS spectra for shotgun lipidomics, *Analytical Chemistry*, 2017, 89 (13), 7046–7052

- Graca D. Coelho, Jabs Wolfgang, Hartmer Ralf, Beris Photis, Clerici Lorella, Stoermer Carsten, Samii Kaveh, Hochstrasser Denis, **Tsybin Yury O.**, Scherl Alexander, Lescuyer Pierre. Identification of hemoglobin variants by top-down mass spectrometry using selected diagnostic product ions. *Analytical and Bioanalytical Chemistry*, 2015, 407(10), 2837-2845
- Ivanov Mark V., Levitsky Lev I., Lobas Anna A., Panic Tanja, Laskay Unige A., Mitulovic Goran, Schmid Rainer, Pridatchenko Marina L., **Tsybin Yury O.**, Gorshkov Mikhail V. Empirical multi-dimensional space for scoring peptide spectrum matches in shotgun proteomics. *Journal of Proteome Research* (2014) 13, 1911–1920
- Schouwey Clement, Holstein Julian J., Scopelliti Rosario, Zhurov Konstantin O., Nagornov Konstantin O., **Tsybin Yury O.**, Smart Oliver S., Bricogne Gerard, Severin Kay. Self-Assembly of a Giant Molecular Solomon Link from 30 Subcomponents. *Angewandte Chemie Int. Ed.* (2014)
- Smith, Lloyd M., Kelleher, Neil L., Linial, Michal, Goodlett, David, Langridge-Smith, Pat, Ah Goo, Young; Safford, George; Bonilla, Leo; Kruppa, George; Zubarev, Roman; Rontree, Jon; Chamot-Rooke, Julia; Garavelli, John; Heck, Albert; Loo, Joseph; Penque, Deborah; Hornshaw, Martin; Hendrickson, Christopher; Pasa-Tolic, Ljiljana; Borchers, Christoph; Chan, Dominic; Young, Nicholas; Agar, Jeffrey; Masselon, Christophe; Gross, Michael; McLafferty, Fred; **Tsybin, Yury**; Ge, Ying; Sanders, Ian; Langridge, James; Whitelegge, Julian; Marshall, Alan. Proteoform: a single term describing proteome complexity. *Nature Methods* (2013) 10, 186-187

Note: this article is a joint contribution from Top-Down Proteomics Consortium, of which YT is a board member, more details at www.topdownproteomics.org

Review articles and book chapters in the last 5 years (4)

- Tsybin Yury O.** From high to super-resolution mass spectrometry. *Chimia* (2014) 68, 168–174
- Tsybin Yury O.**, Nagornov Konstantin, Kozhinov Anton. Advanced fundamentals in Fourier transform mass spectrometry. Chapter in "FTMS Fundamentals and Applications", edited by Philippe Schmitt-Kopplin (2018)
- Tsybin, Yury O.** Structural analysis of complex molecular systems by high-resolution and tandem mass spectrometry. Chapter in "Discovering the Future of Molecular Sciences", edited by Bruno Pignataro, Wiley and Sons (2014)
- Zhurov, Konstantin O.; Wodrich, Matthew; Fornelli, Luca; Laskay, Unige A.; and **Tsybin, Yury O.**; Principles of electron capture and transfer dissociation mass spectrometry applied to peptide and protein structure analysis. *Royal Society of Chemistry Reviews* (2013) 42(12) 5014-5030

Articles in peer-reviewed journals older than 5 years (60)

- Fornelli Luca, Damoc Eugen, Thomas Paul M., Kelleher Neil L., Aizikov Konstantin, Denisov Eduard, Makarov Alexander, and **Tsybin Yury O.** Top-down analysis of monoclonal antibody IgG1 by electron transfer dissociation Orbitrap FTMS. *Molecular and Cellular Proteomics* (2012) 11(12):1758-67 Note: collaborators provided technical support in data acquisition and analysis
- Miladinovic Sasa M., Kozhinov Anton N., Tsybin Oleg Yu., **Tsybin Yury O.** Sidebands in Fourier transform ion cyclotron resonance mass spectra. *International Journal of Mass Spectrometry* (2012) 325-327, 10-18. **Paper received the Int. J. Mass Spectrom. Award as "Best Student Paper of 2012"** Note: collaborator contributed to the discussions on the analytical model of sidebands
- Miladinovic Sasa M., Fornelli Luca, Lu Yu, Piech Krzysztof M., Girault Hubert H., **Tsybin Yury O.** In-spray supercharging of peptides and proteins in electrospray ionization mass spectrometry. *Analytical Chemistry* (2012), 84, 4647-4651 Note: collaborators provided technical support (custom-made dual-sprayers for ESI MS)
- Miladinovic Sasa M., Kozhinov Anton N., Gorshkov Mikhail V., **Tsybin Yury O.** On the utility of isotopic fine structure mass spectrometry in protein identification. *Analytical Chemistry* (2012), 84, 4042–4051 Note: collaborator is acknowledged for discussions and consulting
- Kozhinov Anton N., **Tsybin Yury O.** Filter diagonalization method-based mass spectrometry for molecular and macromolecular structure analysis. *Analytical Chemistry* (2012) 84, 2850-2856
- Tsybin Yury O.**, Fornelli Luca, Parra Julien, Stoermer Carsten, Luebeck Markus, Nallet Sophie, Wurm Florian M., Hartmer Ralf. Structural analysis of intact monoclonal antibodies by electron transfer dissociation mass spectrometry. *Analytical Chemistry* (2011), 83 (23), 8919–8927 Note: collaborators provided technical support in data acquisition and analysis
- Ben Hamidane Hisham; Vorobyev Aleksey; **Tsybin Yury O.**; Repeatability and reproducibility of product ion abundances in electron capture dissociation mass spectrometry of peptides. *European Journal of Mass Spectrometry* (2011) 17, 321-331
- Vorobyev Aleksey, Gorshkov Mikhail V., **Tsybin Yury O.** Two-fold resolving power increase in Fourier transform mass spectrometry of proteins by double frequency measurement. *International Journal of Mass Spectrometry*, 306 (2011) 227–231 Note: collaborator provided consulting on experimental design

9. Fornelli Luca; Schmid W. Adrien; Horst Vogel; **Tsybin Yury O.** Deamidation and transamidation of substance P induced by tissue transglutaminase and revealed by electron capture dissociation Fourier transform mass spectrometry. *Chemistry – A European Journal* (2011), Volume 17, Issue 2, 486–497. **Journal inside cover picture** Note: collaborator provided technical support in biophysical sample characterization
10. Ben Hamidane Hisham; Vorobyev Aleksey; Larregola Maud; Lukaszuk Aneta; Tourwé Dirk; Lavielle Solange, Karoyan Philippe, **Tsybin Yury O.**; Radical stability directs electron capture and transfer dissociation of beta amino acids in peptides. *Chemistry – A European Journal* (2010), 16(15), 4612-4622. **Selected as a Top Interesting Paper of Swiss Origin (Chimia (2010) 6)** Note: collaborators provided synthetic beta-amino acids
11. Gorshkov Mikhail V., Fornelli Luca, **Tsybin Yury O.** Observation of ion coalescence in Orbitrap FTMS. *Rapid Communications in Mass Spectrometry* (2012), 26, 1711-1717 Note: LSMB was responsible for the experimental work, whereas Dr. Gorshkov was responsible for the coalescence model. Joint discussions and manuscript writing.
12. Wodrich Matthew D., Zhurov Konstantin O., Vorobyev Aleksey, Ben Hamidane Hisham, Corminboeuf Clemence, **Tsybin Yury O.** Heterolytic N-Calpha bond cleavage in electron capture and transfer dissociation of peptide cations. *Journal of Physical Chemistry B* (2012) 116(35), 10807-10815 Note: Group of Prof. Tsybin (below referred to as LSMB) generated the idea behind the study, participated in discussions and manuscript writing. Group of Prof. Corminboeuf performed quantum chemistry calculations and contributed to mechanism discussions and manuscript writing.
13. Nallet Sophie, Fornelli Luca, Schmitt Simone, Parra Julien, Baldi Lucia, **Tsybin Yury O.**, Wurm Florian M. Glycan variability on a recombinant IgG antibody transiently produced in HEK-293E cells. *New biotechnology* (2012), 29 (4), 471-476 Note: LSMB actively participated in sample characterization and manuscript writing
14. Pridatchenko Marina L., Perlova Tatyana Yu., Ben Hamidane Hisham, Goloborodko Anton A., Tarasova Irina A., Gorshkov Alexander V., Evreenov Victor V., **Tsybin Yury O.**, Gorshkov Mikhail V. On the utility of critical chromatography of biomacromolecules to predict intact protein retention in gradient HPLC. *Journal of Analytical and Bioanalytical Chemistry* (2012) 402, 2521–2529 Note: LSMB actively participated in experimental work and manuscript writing
15. Albrieux Florian; Ben Hamidane Hisham; Chirot Fabien; Antoine Rodolphe; **Tsybin Yury O.**; Dugourd Philippe. Competition between alpha-helical and globular conformations of transmembrane peptide variants in the gas phase. *Journal of Physical Chemistry A* (2011) 115, 4711-4718 Note: LSMB generated the idea behind the paper, participated in the experimental work, discussions, and paper writing
16. Schmid Adrien W., Condemi Enrico, Vogel Horst, Tuchscherer Gabriele, Mutter Manfred, Hamelin Romain, Chiappe Diego, Moniatte Marc, **Tsybin Yury O.** Glutamine deamidation and covalent peptide cross-linking are key events observed in tissue transglutaminase induced beta-amyloid peptide aggregation. *Journal of Biological Chemistry* (2011) 286, 14, 12172-12188 Note: this multi-year work was performed primarily by Dr. Schmid and primarily during his 1 year postdoctoral stay at LSMB
17. Chirot Fabien; Albrieux Florian; Vorobyev Aleksey; Antoine Rodolphe; **Tsybin Yury O.**; Dugourd Philippe. Conformational landscape of polyalanine and polyglycine dications in the gas phase. *Journal of Physical Chemistry A* (2010), 114(25), 6888-6896 Note: LSMB generated the idea behind the paper, participated in the experimental work, discussions, and manuscript writing
18. Laraillet Vincent, Vorobyev Aleksey, Brunet Claire, Lemoine Jerome, **Tsybin Yury O.**, Antoine Rodolphe, Dugourd Philippe. Comparative dissociation of peptide polyanions by electron impact and photon-induced electron detachment. *Journal of the American Society for Mass Spectrometry* (2010), 21(4), 670-680 Note: LSMB provided experimental data on electron detachment dissociation, participated in discussions and manuscript writing
19. Graca D. Coelho, Lescuyer Pierre, **Tsybin Yury O.**, Hartmer Ralf, Meyer Markus, Samii Kaveh, Hochstrasser Denis, Scherl Alexander. Electron transfer dissociation mass spectrometry of hemoglobin on clinical samples. *Journal of the American Society for Mass Spectrometry* (2012) 23, 10, 1750-1756
Note: Ph.D. student Coelho Graca is co-advised by YT and Prof. Hochstrasser (University of Geneva). YT participated in discussions and manuscript preparation.
20. Wigginton Krista Rule, Menin Laure, Sigstam Therese, Gannon Greg, Cascella Michele, Ben Hamidane Hisham, **Tsybin Yury O.**, Waridel Patrice, Kohn Tamar. UV radiation induces genome-mediated, site-specific cleavage in viral proteins, *ChemBioChem* (2012), 13, 837-845
21. Chirot Fabien, Calvo Florent, Albrieux Florian, Lemoine Jérôme, **Tsybin Yury O.**, Dugourd Philippe. Statistical analysis of ion mobility spectrometry. II. Adaptively biased methods and shape correlations. *Journal of the American Society for Mass Spectrometry* (2012), 23, 1279-1288
22. Chirot Fabien, Calvo Florent, Albrieux Florian, Lemoine Jérôme, **Tsybin Yury O.**, Dugourd Philippe. Statistical analysis of ion mobility spectrometry. I. Unbiased and guided replica-exchange molecular dynamics. *Journal of the American Society for Mass Spectrometry* (2012) 23, 386-396
23. Hanif Muhammad, Nazarov Alexey A., Legin Anton, Groessl Michael, Arion Vladimir B., Jakupec Michael A., **Tsybin Yury O.**, Dyson Paul J., Keppler Bernhard K., Hartinger Christian G. Maleimide-functionalised organoruthenium anticancer agents for tumour targeting; *ChemComm* (2012) 48, 1475-1477

24. Meier Samuel M., **Tsybin Yury O.**, Dyson Paul J., Keppler Bernhard K., Hartinger Christian G. Fragmentation methods on the balance: unambiguous top-down mass spectrometric characterization of oxaliplatin-ubiquitin binding sites. *Journal of Analytical and Bioanalytical Chemistry* (2012) 402, 2655–2662
25. Luzan Serhiy M., **Tsybin Yury O.**, Talyzin Alexandr V. Reaction of C₆₀ with hydrogen gas: in situ monitoring and pathways. *Journal of Physical Chemistry C* (2011) 115, 11484-11492
26. Talyzin Alexandr V., Luzan Serhiy M., Leifer K., Akhtar S., Fetzer J., Cataldo Franco, **Tsybin Yury O.**, Tai C.W., Dzwilewski Andrei, Moons E. Coronene fusion by heat treatment: road to nano-graphenes. *Journal of Physical Chemistry C* (2011) 115, 13207–13214
27. Mendes Filipa, Groessl Michael, Nazarov Alexey A., **Tsybin Yury O.**, Sava Gianni, Santos Isabel, Dyson Paul J., Casini Angela. Metal-based inhibition of poly(ADP-ribose) polymerase – the guardian angel of DNA. *Journal of Medicinal Chemistry* (2011), 54 (7), 2196–2206
28. Groessl Michael; **Tsybin Yury O.**; Hartinger Christian G.; Keppler Bernhard K.; Dyson Paul J. Ruthenium versus platinum: interactions of anticancer metallodrugs with duplex oligonucleotides characterized by electrospray ionization mass spectrometry. *Journal of Biological Inorganic Chemistry* (2010), 15, 677-688
29. Vorobyev Aleksey; Ben Hamidane Hisham; **Tsybin Yury O.**; Electron capture dissociation product ion abundances at the X amino acid in RAAAXAAAAK peptides correlate with amino acid polarity and radical stability. *Journal of the American Society for Mass Spectrometry*, (2009), 20(12), 2273-2283
30. Ben Hamidane Hisham, He Huan, Hendrickson Christopher, Emmett Mark, Tsybin Oleg Yu., Marshall Alan G., **Tsybin Yury O.** Periodic sequence distribution of product ion abundances in electron capture dissociation of amphipathic peptides and proteins. *Journal of the American Society for Mass Spectrometry*, (2009), 20 (6), 1182-1192
31. Ben Hamidane Hisham; Chiappe Diego; Hartmer Ralf; Vorobyev Aleksey; Moniatte Marc; **Tsybin Yury O.**; Electron capture and transfer dissociation: peptide structure analysis at different ion internal energy levels. *Journal of the American Society for Mass Spectrometry* (2009), 20(4), 567-575
32. Luzan Serhiy M., Cataldo Franco, **Tsybin Yury O.**, Talyzin Alexandr V. Thermal decomposition of C₆₀H₁₈. *Journal of Physical Chemistry C* (2009), 113 (30), 13133-13138
33. Pouthier Vincent; **Tsybin Yury O.**; Amide-I relaxation-induced hydrogen bond distortion: an intermediate in electron capture dissociation mass spectrometry of alpha-helical peptides? *Journal of Chemical Physics* (2008), 129, 095106
34. **Tsybin Yury O.**; Quinn John P.; Tsybin Oleg Yu.; Hendrickson Christopher L.; Marshall Alan G. Electron capture dissociation implementation progress in Fourier transform ion cyclotron resonance mass spectrometry. *Journal of the American Society for Mass Spectrometry* (2008), 19 (6), 762-771 **Journal cover picture**
35. Hartinger Christian G.; **Tsybin Yury O.**; Fuchser Jens; Dyson Paul J. Characterization of platinum anticancer drug protein-binding sites using a top-down mass spectrometric approach. *Inorganic Chemistry* (2008), 47, 17-19
36. Egger Alexander, Hartinger Christian, Ben Hamidane Hisham, **Tsybin Yury O.**, Keppler Bernhard, Dyson Paul; High resolution mass spectrometry for studying the interactions of cisplatin with oligonucleotides. *Inorganic Chemistry* (2008), 47(22), 10626-10633
37. Hartinger Christian G., Casini Angela, Duhot Céline, **Tsybin Yury O.**, Messori Luigi, Dyson Paul J.; Stability of an organometallic ruthenium-ubiquitin adduct in the presence of glutathione: Relevance to antitumour activity. *Journal of Inorganic Biochemistry* (2008) 102(12) 2136-2141
38. Wågberg Thomas; Hedenström Mattias; Talyzin Alexandr V.; Sethson Ingmar; **Tsybin Yury O.**; Purcell Jeremiah M.; Marshall Alan G.; Noréus Dag; Johnels Dan. Synthesis and structural characterization of C₇₀H₃₈. *Angewandte Chemie International Edition* (2008) 47, 2796-2799
39. **Tsybin Yury O.**; He Huan; Emmett Mark R.; Hendrickson Christopher L.; Marshall Alan G. Ion activation in electron capture dissociation to distinguish between N-terminal and C-terminal product ions. *Analytical Chemistry* (2007) 79(20) 7596-7602
40. Woodling Kellie A.; **Tsybin Yury O.**; Nilson, Carol; Al-Naggar Iman M.; Bubb Michael R.; Edison Arthur S.; Marshall Alan G.; Eyer John R. Identification of single and double sites of phosphorylation by ECD FT-ICR/MS in peptides related to the phosphorylation site domain of the myristoylated alanine-rich C kinase protein. *Journal of the American Society for Mass Spectrometry* (2007) 18, 2137-2145
41. **Tsybin, Yury O.**; Haselmann, Kim F.; Emmett, Mark R.; Hendrickson, Christopher L.; Marshall, Alan G.; Charge location directs electron capture dissociation of peptide dications. *Journal of the American Society for Mass Spectrometry* (2006) 17(12), 1704-1711
42. **Tsybin, Yury O.**; Hendrickson, Christopher L.; Beu, Steven C.; Marshall, Alan G.; Impact of ion magnetron motion on electron capture dissociation Fourier transform ion cyclotron resonance mass spectrometry. *International Journal of Mass Spectrometry* (2006) 255-256, 144-149
43. Talyzin, Alexandr V.; **Tsybin, Yury O.**; Purcell, Jeremiah M.; Schaub, Tanner M.; Sundqvist, Bertil; Marshall, Alan G.; Time-resolved reaction of hydrogen gas with C₆₀ at elevated temperature and pressure: hydrogenation and cage fragmentation. *Journal of Physical Chemistry A* (2006) 110(27), 8528-8534

44. Hagman, Charlotte; **Tsybin, Yury O.**; Hakansson, Per; Solution-phase deuterium/hydrogen exchange at a specific residue using nozzle-skimmer and electron capture dissociation mass spectrometry. *Rapid Communications in Mass Spectrometry* (2006), 20(4), 661-665
45. Talyzin, Alexandr V.; Dzwilewski, Andrei; Sundqvist, Bertil; **Tsybin, Yury O.**; Purcell, Jeremiah M.; Marshall, Alan G.; Shulga, Y.; McCammon, C.; Dubrovinsky, Leonid. Hydrogenation of C₆₀ at 2 GPa pressure and high temperature. *Journal of Chemical Physics* (2006), 325, 445-451
46. Talyzin, Alexandr V.; **Tsybin, Yury O.**; Schaub, Tanner M.; Sundqvist, Bertil; Marshall, Alan G.; Composition of hydrogenated fullerene mixtures obtained by C₆₀ reaction with H₂ revealed by high resolution mass spectrometry. *Journal of Physical Chemistry B* (2005), 109(26), 12742-12747
47. Talyzin, Alexandr V.; **Tsybin, Yury O.**; Peera, Asghar A.; Schaub, Tanner M.; Marshall, Alan G.; Sundqvist, Bertil; Mauron, Philippe; Zuetzel, Andreas; Billups, W. E. Synthesis of C₅₉H_x and C₅₈H_x fullerenes stabilized by hydrogen. *Journal of Physical Chemistry B* (2005), 109(12), 5403-5405
48. Wagberg, Thomas.; Johnels, Dan; Peera, Ashgar; Hedenstrom, Mattias; Schulga, Yury M.; **Tsybin, Yury O.**; Purcell, Jeremiah M.; Marshall, Alan G.; Noreus, Dag; Sato, Toyoto; Talyzin, Alexander V. Selective synthesis of the C_{3v} isomer of C₆₀H₁₈. *Organic Letters* (2005), 7(25), 5557-5560
49. **Tsybin, Youri O.**; Witt, Matthias; Baykut, Goekhan; Hakansson, Per. Electron capture dissociation Fourier transform ion cyclotron resonance mass spectrometry in the electron energy range 0-50 eV. *Rapid Communications in Mass Spectrometry* (2004), 18(14), 1607-1613
50. **Tsybin, Youri O.** Enhancement of the efficiency of dissociative capture of low-energy electrons by macromolecular ions. *Khimicheskaya Fizika* (2004), 23(3), 88-91
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