

Publications

In the darkest hour: Analyses of a black spot on the last page of the diary of polar explorer Jørgen Brønlund (d. 1907)

Rasmussen, K. L., Delbey, T., Skytte, L., La Nasa, J., Colombini, M. P., Ravnsbæk, D. B., Jørgensen, B., Kjeldsen, F., Grønnow, B. & Larsen, S., Aug 2021, In: *Archaeometry*. 63, 4, p. 893-905

Boosting MS1-only Proteomics with Machine Learning Allows 2000 Protein Identifications in Single-Shot Human Proteome Analysis Using 5 min HPLC Gradient

Ivanov, M. V., Bubis, J. A., Gorshkov, V., Abdrakhimov, D. A., Kjeldsen, F. & Gorshkov, M. V., Apr 2021, In: *Journal of proteome research*. 20, 4, p. 1864-1873

Biosaur: An open-source Python software for liquid chromatography–mass spectrometry peptide feature detection with ion mobility support

Abdrakhimov, D. A., Bubis, J. A., Gorshkov, V., Kjeldsen, F., Gorshkov, M. V. & Ivanov, M. V., 15. Jan 2021, (E-pub ahead of print) In: *Rapid Communications in Mass Spectrometry*. p. e9045

Elucidating the cellular response of silver nanoparticles as a potential combinatorial agent for cisplatin chemotherapy

Rank Miranda, R., Pereira da Fonseca, M., Korzeniowska, B., Skytte, L., Lund Rasmussen, K. & Kjeldsen, F., 10. Nov 2020, In: *Journal of Nanobiotechnology*. 18, 15 p., 164.

PhosphoShield: Improving Trypsin Digestion of Phosphoproteins by Shielding the Negatively Charged Phosphate Moiety

Bubis, J. A., Gorshkov, V., Gorshkov, M. V. & Kjeldsen, F., Oct 2020, In: *Journal of The American Society for Mass Spectrometry*. 31, 10, p. 2053-2060

GiTx1(β / κ -theraphotoxin-Gi1a), a novel toxin from the venom of Brazilian tarantula *Grammostola iheringi* (Mygalomorphae, Theraphosidae): Isolation, structural assessments and activity on voltage-gated ion channels

Montandon, G. G., Cassoli, J. S., Peigneur, S., Braga, T. V., Moreira Dos Santos, D., Bittencourt Paiva, A. L., Ricardo de Moraes, É., Kushmerick, C., Borges, M. H., Richardson, M., Monteiro de Castro Pimenta, A., Kjeldsen, F., Vasconcelos Diniz, M. R., Tytgat, J. & Elena de Lima, M., Sep 2020, In: *Biochimie*. 176, p. 138-149

Moving pieces in a cellular puzzle: A cryptic peptide from the scorpion toxin Ts14 activates AKT and ERK signaling and decreases cardiac myocyte contractility via dephosphorylation of phospholamban

Gómez-Mendoza, D. P., Lemos, R. P., Jesus, I., Gorshkov, V., McKinnie, S. M. K., Vederas, J. C., Kjeldsen, F., Guatimosim, S., Santos, R. A., Pimenta, A. M. C. & Verano-Braga, T., 7. Aug 2020, In: *Journal of proteome research*. 19, 8, p. 3467-3477

The Cytotoxicity of Metal Nanoparticles Depends on Their Synergistic Interactions

Korzeniowska, B., Fonseca, M. P., Gorshkov, V., Skytte, L., Rasmussen, K. L., Schrøder, H. D. & Kjeldsen, F., 1. Aug 2020, In: *Particle and Particle Systems Characterization*. 37, 8, 2000135.

Cardiomyocyte Proteome Remodeling due to Isoproterenol-Induced Cardiac Hypertrophy during the Compensated Phase

Parreira, R. C., Gómez-Mendoza, D. P., de Jesus, I. C. G., Lemos, R. P., Santos, A. K., Rezende, C. P., Figueiredo, H. C. P., Pinto, M. C. X., Kjeldsen, F., Guatimosim, S., Resende, R. R. & Verano-Braga, T., Jul 2020, In: *Proteomics - Clinical Applications*. 14, 4, 12 p., 2000017.

Proteomic and phosphoproteomic analyses in HL60 cells treated with the scorpion-derived peptide Lunatin-1

Lima-Batista, E. M., Gómez-Mendoza, D. P., Moysés, M. N., de Sousa Gomes, K., de Lima, M. E., Souza-Fagundes, E. M., da Silva, A. M., Kjeldsen, F., Verano-Braga, T. & Pimenta, A. M. C., 20. Apr 2020, In: *Toxicon*. 177, Suppl. 1, p. S39 1 p.

DirectMS1: MS/MS-free identification of 1000 proteins of cellular proteomes in 5 minutes

Ivanov, M. V., Bubis, J. A., Gorshkov, V. A., Tarasova, I. A., Levitsky, L. I., Lobas, A. A., Solovyeva, E. M., Pridatchenko, M. L., Kjeldsen, F. & Gorshkov, M. V., Mar 2020, In: *Analytical chemistry*. 92, 6, p. 4326-4333

Fast and Robust Proteome Screening Platform Identifies Neutrophil Extracellular Trap Formation in the Lung in Response to Cobalt Ferrite Nanoparticles

Billing, A. M., Knudsen, K. B., Chetwynd, A. J., Ellis, L.-J. A., Tang, S. V. Y., Berthing, T., Wallin, H., Lynch, I., Vogel, U. & Kjeldsen, F., 2020, In: ACS Nano. 14, 4, p. 4096-4110

HUMOS: How to Understand My Orbitrap Spectrum? - An interactive web-based tool to teach the basics of mass spectrometry-based proteomics

Bubis, J. A., Gorshkov, V., Billing, A. M. & Kjeldsen, F., 2020, In: Journal of proteome research. 19, 10, p. 3910-3918

Rpn4 and proteasome-mediated yeast resistance to ethanol includes regulation of autophagy

Bubis, J. A., Spasskaya, D. S., Gorshkov, V. A., Kjeldsen, F., Kofanova, A. M., Lekanov, D. S., Gorshkov, M. V., Karpov, V. L., Tarasova, I. A. & Karpov, D. S., 2020, In: Applied Microbiology and Biotechnology. 104, 9, p. 4027-4041

Angiotensin-(1-7) oral treatment after experimental myocardial infarction leads to downregulation of CXCR4

Gómez-Mendoza, D. P., Marques, F. D., Melo-Braga, M. N., Sprenger, R. R., Sinisterra, R. D., Kjeldsen, F., Santos, R. A. & Verano-Braga, T., 30. Sep 2019, In: Journal of Proteomics. 208, 11 p., 103486.

DirectMS1: MS/MS-free identification of 1000 proteins of cellular proteomes in 5 minutes

Ivanov, M. V., Bubis, J. A., Gorshkov, V., Tarasova, I. A., Levitsky, L. I., Lobas, A. A., Solovyeva, E. M., Pridatchenko, M. L., Kjeldsen, F. & Gorshkov, M. V., 5. Sep 2019, In: BioRxiv. 17 p.

Assessment of protein extraction and digestion efficiency of well-established shotgun protocols for heart proteomics

Rodrigues-Ribeiro, L., Melo-Braga, M. N., Kjeldsen, F., Gómez-Mendoza, D. P. & Verano-Braga, T., 1. Aug 2019, In: Analytical Biochemistry. 578, p. 51-59

Protein corona formed on silver nanoparticles in blood plasma is highly selective and resistant to physicochemical changes of the solution

Gorshkov, V., Bubis, J. A., Solovyeva, E. M., Gorshkov, M. V. & Kjeldsen, F., 18. Mar 2019, In: Environmental Science: Nano. 6, 4, p. 1089-1098

Silver nanoparticle-induced expression of proteins related to oxidative stress and neurodegeneration in an in vitro human blood-brain barrier model

Khan, A. M., Korzeniowska, B., Gorshkov, V., Tahir, M., Schröder, H., Skytte, L., Rasmussen, K. L., Khandige, S., Møller-Jensen, J. & Kjeldsen, F., 9. Jan 2019, In: Nanotoxicology. 13, 2, p. 221-239

Five-Minute Proteome: An MS/MS-Free Approach to Protein Identification and Quantification

Ivanov, V., Bubis, J. A., Gorshkov, V., Tarasova, I. A., Solovyeva, E. M., Levitsky, L. I., Lobas, A. A., Pridatchenko, M. L., Kjeldsen, F. & Gorshkov, M. V., 2019.

Neutrophil Extracellular Trap Formation in the Lung as Response to Magnetic Cobalt Ferrite Nanoparticles

Billing, A. M., Knudsen, K. B., Wallin, H., Tang, S. VY., Lynch, I., Vogel, U. & Kjeldsen, F., 2019.

Ocular penetration of fluorometholone-loaded PEG-PLGA nanoparticles functionalized with cell-penetrating peptides

Gonzalez-Pizarro, R., Parrotta, G., Vera, R., Sánchez-López, E., Galindo, R., Kjeldsen, F., Badia, J., Baldoma, L., Espina, M. & García, M. L., 2019, In: Nanomedicine. 14, 23, p. 3089-3104 16 p.

Searching for the Ethanol-Tolerant Yeast: Rpn4- and Proteasome-Dependent Yeast Proteome Remodeling in Response to Ethanol Stress

Bubis, J. A., Tarasova, I. A., Gorshkov, V., Karpov, V. L., Spasskaya, D. S., Kjeldsen, F., Gorshkov, M. V. & Karpov, D. S., 2019.

Co-exposure to silver nanoparticles and cadmium induce metabolic adaptation in HepG2 cells

Miranda, R. R., Gorshkov, V., Korzeniowska, B., Kempf, S. J., Neto, F. F. & Kjeldsen, F., 11. Jul 2018, In: Nanotoxicology. 12, 7, p. 781-795

SuperQuant-assisted comparative proteome analysis of glioblastoma subpopulations allows for identification of potential novel therapeutic targets and cell markers

Verano-Braga, T., Gorshkov, V., Munthe, S., Sørensen, M. D., Kristensen, B. W. & Kjeldsen, F., 6. Feb 2018, In: *Oncotarget*. 9, 10, p. 9400-9414

Comparative proteomics as a tool for identifying specific alterations within interferon response pathways in human glioblastoma multiforme cells

Tarasova, I. A., Tereshkova, A. V., Lobas, A. A., Solovyeva, E. M., Sidorenko, A. S., Gorshkov, V., Kjeldsen, F., Bubis, J. A., Ivanov, M. V., Ilna, I. Y., Moshkovskii, S. A., Chumakov, P. M. & Gorshkov, M. V., 1. Jan 2018, In: *OncoTarget*. 9, 2, p. 1785-1802

Co-exposure to silver nanoparticles and cadmium induce metabolic adaptation in HepG2 cells

Kjeldsen, F., 2018.

Co-exposure to silver nanoparticles and cadmium ions induces metabolic adaptation in HepG2 cells

Kjeldsen, F., 2018.

Comparative proteomics study for elucidation of potential mechanisms underlying yeast resistance to alcohols

Kjeldsen, F., 2018.

LC-MS/MS-based characterization of glioblastoma cell responses to type I interferons for establishing defects in antiviral mechanisms

Kjeldsen, F., 2018.

Perturbation of Protein Conformation has Minor Impact on Nanoparticle Corona Composition

Kjeldsen, F., 2018.

Proteome profiling of bronchioalveolar lavage fluid after exposure to magnetic iron and cobalt oxide nanoparticles

Kjeldsen, F., 2018.

Co-exposure of silver nanoparticles and Cd²⁺ induce disruption of the metabolic reprogramming in HepG2 cells

Kjeldsen, F., 2017.

On the Authenticity of a Relic: An Archaeometric Investigation of the Supposed Bread Sack of Saint Francesco of Assisi

Rasmussen, K. L., Degano, I., Colombini, M. P., Kjeldsen, F. & van der Plicht, J., 2017, In: *Radiocarbon: An International Journal of Cosmogenic Isotope Research*. 59, 5, p. 1425-1433

Toxicological interactions of silver nanoparticles and non-essential metals in human hepatocarcinoma cell line

Miranda, R. R., Bezerra, A. G., Ribeiro, C. A. O., Randi, M. A. F., Voigt, C. L., Skytte, L., Rasmussen, K. L., Kjeldsen, F. & Neto, F. F., 2017, In: *Toxicology in Vitro*. 40, p. 134-143

Uranyl Photocleavage of Phosphopeptides Yields Truncated C-Terminally Amidated Peptide Products

Elnegaard, R. L. B., Møllegaard, N. E., Zhang, Q., Kjeldsen, F. & Jørgensen, T. J. D., 2017, In: *ChemBioChem*. 18, 12, p. 1117-1122

Peptide de novo sequencing of mixture tandem mass spectra

Gorshkov, V., Hotta, S. Y. K., Braga, T. V. & Kjeldsen, F., 19. Sep 2016, In: *Proteomics*. 16, 18, p. 2470-2479

High-performance hybrid Orbitrap mass spectrometers for quantitative proteome analysis: Observations and implications

Williamson, J. C., Edwards, A. V. G., Verano-Braga, T., Schwämmle, V., Kjeldsen, F., Jensen, O. N. & Larsen, M. R., Mar 2016, In: *Proteomics*. 16, 6, p. 907-914

Extending the Quantitative Information of the Glioblastoma Proteome Using SuperQuant

Kjeldsen, F., 28. Sep 2015.

Charge Inversion of Phospholipids by Dimetal Complexes for Positive Ion-Mode Electrospray Ionization Mass Spectrometry Analysis

Svane, S., Gorshkov, V. & Kjeldsen, F., 1. Sep 2015, In: *Analytical Chemistry*. 87, 17, p. 8732-8739

SuperQuant: a Data Processing Approach to Increase Quantitative Proteome Coverage

Gorshkov, V., Verano-Braga, T. & Kjeldsen, F., 15. May 2015, In: *Analytical Chemistry*. 87, 12, p. 6319–6327

Effect of Metals in Biomimetic Dimetal Complexes on Affinity and Gas-Phase Protection of Phosphate Esters

Svane, S., Jørgensen, T. J. D., McKenzie, C. & Kjeldsen, F., 2015, In: *Analytical Chemistry*. 87, 14, p. 7060–7068

The Selectivity of Water-based Pyrophosphate Recognition is Tuned by Metal Substitution in Dimetallic Receptors

Svane, S., Kjeldsen, F., McKee, V. & McKenzie, C., 2015, In: *Dalton Transactions (Print Edition)*. 44, 26, p. 11877-11886

Exposure to silver nanoparticles induces size- and dose-dependent oxidative stress and cytotoxicity in human colon carcinoma cells

Miethling-Graff, R., Rumpker, R., Richter, M., Verano-Braga, T., Kjeldsen, F., Brewer, J. R., Hoyland, J., Rubahn, H-G. & Erdmann, H., 2014, In: *Toxicology in Vitro*. 28, 7, p. 1280–1289

Insights into the Cellular Response Triggered by Silver Nanoparticles using Quantitative Proteomics

Verano-Braga, T., Miethling-Graff, R., Wojdyla, K. I., Rogowska-Wrzesinska, A., Brewer, J. R., Erdmann, H. & Kjeldsen, F., 2014, In: *A C S Nano*. 8, 3, p. 2161–2175

N-terminal sequence tagging using reliably determined b2 ions: A useful approach to deconvolute tandem mass spectra of co-fragmented peptides in proteomics

Kryuchkov, F., Verano-Braga, T. & Kjeldsen, F., 2014, In: *Journal of Proteomics*. 103, May, p. 254–260

Q-Exactive Plus and Orbitrap Fusion: Determination of optimal settings for peptide and phosphopeptide identification

Verano-Braga, T., Williamson, J., Edwards, A., Jensen, O. N., Kjeldsen, F. & Larsen, M. R., 2014.

Qualitative and Quantitative Comparison of Q Exactive Plus and Orbitrap Fusion for Label Free and Isobaric Tag Based Quantification

Williamson, J., Verano-Braga, T., Edwards, A., Kjeldsen, F., Larsen, M. R. & Jensen, O. N., 2014.

Moving pieces in a venomous puzzle: unveiling post-translationally modified toxins from *Tityus serrulatus*

Verano-Braga, T., Dutra, A. A. A., León, I. R., Melo-Braga, M. N., Roepstorff, P., Pimenta, A. M. C. & Kjeldsen, F., 5. Jul 2013, In: *Journal of Proteome Research*. 12, 7, p. 3460-3470 11 p.

Application of complementary ions to identify co-isolated peptides in complex samples

Kjeldsen, F., Hansen, T. A., Verano-Braga, T., Sprenger, R. R. & Kryuchkov, F., 12. Jun 2013.

Dimetal Phosphate Ester Stabilization and Strong-Cation Exchange Chromatography (DIMPES-SCX): A Novel Approach for Phosphopeptide Enrichment

Verano-Braga, T., Svane, S., McKenzie, C. J. & Kjeldsen, F., 12. Jun 2013.

Utilization of a2/b2 ions as a filter of peptide candidates prior to database searching and identification of isobaric co-isolated peptides

Kryuchkov, F., Verano-Braga, T. & Kjeldsen, F., 9. Jun 2013.

Deconvolution of mixture spectra and increased throughput of Peptide identification by utilization of intensified complementary ions formed in tandem mass spectrometry

Kryuchkov, F., Verano-Braga, T., Hansen, T. A., Sprenger, R. R. & Kjeldsen, F., 3. Jun 2013, In: *Journal of Proteome Research*. 12, 7, p. 3362–3371

DIMETALLIC PROTECTING GROUP FOR PHOSPHORYLATED PEPTIDES AND PROTEINS

McKenzie, Christine, J., Kjeldsen, F. & Svane, S., 10. May 2013, IPC No. G01N 33/ 68 A I, Patent No. WO2013064554, Priority date 30. Apr 2012, Priority No. DK2012PA00290

Discovery and Characterization of Alamandine, a Novel Component of the Renin-Angiotensin System

Lautner, R. Q., Villela, D. C., Fraga-Silva, R. A., Silva, N. C., Verano-Braga, T., Costa-Fraga, F., Jankowski, J., Jankowski, V., De Sousa, F. B., Alzamora, A. C., Soares, E. R., Barbosa, C. M., Kjeldsen, F., Oliveira, A. C., Braga, J. F., Savergnini, S. Q., Etelvino, G. M., Peluso, A. A. B., Passos-Silva, D. G., Ferreira, A. J. & 12 others, Alves, F., Martins, A. S., Raizada, M. K., Paula, R. D., Motta-Santos, D., Klempin, F., Pimenta, A. M. C., Alenina, N., Sinisterra, R. D. M., Bader, M., Campagnole-Santos, M. J. & Santos, R. A., 2013, In: Circulation Research. 112, 8, p. 1104-1111 8 p.

Investigation and Characterization of Potential Dimetallic Tags for the Selective Recognition and Protection of Phosphate Ester Groups in CID Activation

Svane, S., Kjeldsen, F. & McKenzie, C. J., 2013.

New insights into the cellular response triggered by silver nanoparticles using quantitative proteomics

Verano-Braga, T., Miethling-Graff, R., Wojdyla, K. I., Rogowska-Wrzesinska, A., Brewer, J. R., Erdmann, H. & Kjeldsen, F., 2013.

The proteomic profile of Stichodactyla duerdeni secretion reveals the presence of a novel O-linked glycopeptide

Cassoli, J. S., Verano-Braga, T., Oliveira, J. S., Montandon, G. G., Cologna, C. T., Peigneur, S., Pimenta, A. M. D. C., Kjeldsen, F., Roepstorff, P., Tytgat, J. & de Lima, M. E., 2013, In: Journal of Proteomics. 87, p. 89-102

Automated and high confidence protein phosphorylation site localization using complementary collision-activated dissociation and electron transfer dissociation tandem mass spectrometry

Hansen, T. A., Sylvester, M., Jensen, O. N. & Kjeldsen, F., 20. Nov 2012, In: Analytical Chemistry. 84, 22, p. 9694-9699 6 p.

Highlighting Reliable Peptide Fragment Ions for Database Searching using Intensified Golden Complementary Ion Pairs

Kryuchkov, F., Hansen, T. A., Verano-Braga, T. & Kjeldsen, F., 22. May 2012.

Novel Approach for Phosphopeptide Enrichment Based on Phosphate Ester Charge-Tagging and Strong-Cation Exchange Chromatography

Verano-Braga, T., Svane, S., McKenzie, C. J. & Kjeldsen, F., 2012.

Overcoming the Instability of Gaseous Peptide Phosphate Ester Groups by Dimetal Protection

Svane, S., Kryuchkov, F., Lennartson, A., McKenzie, C. J. & Kjeldsen, F., 2012, In: Angewandte Chemie International Edition. 51, 13, p. 3216-3219

PhosProtect - a novel and superior compound to tag and protect phospho-groups during mass spectrometry based phospho-proteomics

Kjeldsen, F., McKenzie, C. J. & Svane, S., 2012, Patent No. 201100849, 9. Nov 2011

Reduction in Database Search Space by Utilization of Amino Acid Composition Information from Electron Transfer Dissociation and Higher-Energy Collisional Dissociation Mass Spectra

Hansen, T. A., Kryuchkov, F. & Kjeldsen, F., 2012, In: Analytical Chemistry. 84, p. 6638-6645 7 p.

Clickers – en Genvej til Øget Opmærksomhed: Pædagogisk udviklingsprojekt ved Universitetspædagogikum 2010

Kjeldsen, F., 9. Jun 2011.

An Interregional and Interdisciplinary Joint Venture for Comprehensive Characterization of Nanoparticles and their Cellular Effect on Human Cell Lines.

Kjeldsen, F., Braga, T. V., Rubahn, H-G., Hoyland, J., Balzer, F. & Schiek, M., 23. May 2011.

Effects of Peptide Backbone Amide-to-Ester Bond Substitution on the Cleavage Frequency in Electron Capture Dissociation and Collision-Activated Dissociation

Kjeldsen, F. & Zubarev, R., 5. May 2011, In: Journal of the American Society for Mass Spectrometry. 16, 1, p. 22-27

Electron Transfer Dissociation Reveals Changes in the Cleavage Frequencies of Backbone Bonds Distant to Amide-to-Ester Substitutions in Polypeptides

Hansen, T. A., Jung, H. R. & Kjeldsen, F., 2011, In: Journal of the American Society for Mass Spectrometry. 22, 11, p. 1953-1957

Enhanced Protein Identification Using Reliable Golden Complementary Ion Pairs from Low-resolution Mass Spectrometry Data

Kjeldsen, F., Jensen, O. N. & Hansen, T. A., 24. Oct 2010.

Undesirable charge-enhancement of isobaric tagged phosphopeptides leads to reduced identification efficiency

Thingholm, T. E., Palmisano, G., Kjeldsen, F. & Larsen, M. R., 6. Aug 2010, In: Journal of Proteome Research. 9, 8, p. 4045-52 8 p.

Effects of Amide-to-Ester Bond Substitution in the Peptide Backbone on the Cleavage Frequency in Electron Transfer Dissociation and Collision-Activated Dissociation

Kjeldsen, F., 2010.

Analytical Utility of Small Neutral Losses from Reduced Species in Electron Capture Dissociation Studied Using SwedECD Database

Kjeldsen, F., 1. Nov 2008, In: Analytical Chemistry. 80, 21, p. 8089-8094 5 p.

Isocratic Solid Phase Extraction-Liquid Chromatography (SPE-LC) Interfaced to High-Performance Tandem Mass Spectrometry for Rapid Protein Identification

Hørning, O. B., Kjeldsen, F., Theodorsen, S., Vorm, O. & Jensen, O. N., 2008, In: Journal of Proteome Research. 7, 8, p. 3159-3167 8 p.

Large-Scale Sequencing og Charge-Enhanced Peptide Ions using Electron Transfer Dissociation and Collision-induced fragmentation

Kjeldsen, F., Giessing, A., Ravnsborg, C., Hansen, T. A. & Jensen, O. N., 2008.

LC-time scale peptide sequencing and PTM characterization in the negative ion-mode using electron detachment dissociation

Kjeldsen, F., Giessing, A. & Jensen, O. N., 2008.

Towards Liquid Chromatography Time-Scale Peptide Sequencing and Characterization of Post-Translational Modifications in the Negative-Ion Mode Using Electron Detachment Dissociation Tandem Mass Spectrometry

Kjeldsen, F., Hørning, O. B., Jensen, S. S., Giessing, A. & Jensen, O. N., 2008, In: Journal of the American Society for Mass Spectrometry. 19, 8, p. 1156-1162

Peptide sequencing and characterization of post-translational modifications by enhanced ion-charging and liquid chromatography electron-transfer dissociation tandem mass spectrometry

Kjeldsen, F., Giessing, A., Ingrell, C. R. & Jensen, O. N., 15. Dec 2007, In: Analytical Chemistry. 79, 24, p. 9243-9252 9 p.

A direct comparison of protein structure in the gas and solution phase: the Trp-cage

Patriksson, A., Adams, C. M., Kjeldsen, F., Zubarev, R. A. & van der Spoel, D., 22. Nov 2007, In: Journal of Physical Chemistry B. 111, 46, p. 13147-13150 3 p.

Analysis of histidine phosphorylation using tandem MS and ion-electron reactions

Kleinnijenhuis, A. J., Kjeldsen, F., Kallipolitis, B., Haselmann, K. F. & Jensen, O. N., 1. Oct 2007, In: Analytical Chemistry. 79, 19, p. 7450-7456 6 p.

SwedCAD, a database of annotated high-mass accuracy MS/MS spectra of tryptic peptides

Fälth, M., Savitski, M. M., Nielsen, M. L., Kjeldsen, F., Andren, P. E. & Zubarev, R. A., 1. Oct 2007, In: Journal of Proteome Research. 6, 10, p. 4063-4067 4 p.

On studying protein phosphorylation patterns using bottom-up LC-MS/MS: the case of human alpha-casein

Kjeldsen, F., Savitski, M. M., Nielsen, M. L., Shi, L. & Zubarev, R. A., 1. Aug 2007, In: Analyst. 132, 8, p. 768-776 8 p.

Relative specificities of water and ammonia losses from backbone fragments in collision-activated dissociation

Savitski, M. M., Kjeldsen, F., Nielsen, M. L. & Zubarev, R. A., 1. Jul 2007, In: Journal of Proteome Research. 6, 7, p. 2669-2673 4 p.

Backbone carbonyl group basicities are related to gas-phase fragmentation of peptides and protein folding

Savitski, M. M., Kjeldsen, F., Nielsen, M. L., Garbuzynskiy, S. O., Galzitskaya, O. V., Surin, A. K. & Zubarev, R. A., 1. Jan 2007, In: Angewandte Chemie - International Edition. 46, 9, p. 1481-1484 3 p.

Hydrogen rearrangement to and from radical z fragments in electron capture dissociation of peptides

Savitski, M. M., Kjeldsen, F., Nielsen, M. L. & Zubarev, R. A., 1. Jan 2007, In: Journal of The American Society for Mass Spectrometry. 18, 1, p. 113-20 8 p.

LC-time Scale Peptide Sequencing and PTM Characterization in the Negative Ion-mode using Electron Detachment Dissociation

Kjeldsen, F., 2007.

Zwitterionic states in gas-phase polypeptide ions revealed by 157-nm ultra-violet photodissociation

Kjeldsen, F., Silivra, O. A. & Zubarev, R. A., 16. Oct 2006, In: Chemistry: A European Journal. 12, 30, p. 7920-8 9 p.

Ion fragmentation by reaction with excited neutral particles

Roman, Z., Alexander, M., Oleg, S., Frank, K. & Armin, H., 30. Aug 2006, IPC No. H01J 49/ 42 A I, Patent No. GB2423631, Priority date 7. Feb 2005, Priority No. DE20051005743

Complementary sequence preferences of electron-capture dissociation and vibrational excitation in fragmentation of polypeptide polycations

Savitski, M. M., Kjeldsen, F., Nielsen, M. L. & Zubarev, R. A., 11. Aug 2006, In: Angewandte Chemie International Edition. 45, 32, p. 5301-3 3 p.

Probing solution- and gas-phase structures of Trp-cage cations by chiral substitution and spectroscopic techniques

Adams, C. M., Kjeldsen, F., Patriksson, A., van der Spoel, D., Gräslund, A., Papadopoulos, E. & Zubarev, R. A., 1. Jul 2006, In: International Journal of Mass Spectrometry. 253, 3, p. 263-273

Determination of the location of positive charges in gas-phase polypeptide polycations by tandem mass spectrometry

Kjeldsen, F., Savitski, M. M., Adams, C. M. & Zubarev, R. A., 1. Jun 2006, In: International Journal of Mass Spectrometry. 252, 3, p. 204-212 9 p.

Prediction of N-C α bond cleavage frequencies in electron capture dissociation of Trp-cage dications by force-field molecular dynamics simulations

Patriksson, A., Adams, C., Kjeldsen, F., Raber, J., Van Der Spoel, D. & Zubarev, R. A., 15. Feb 2006, In: International Journal of Mass Spectrometry. 248, 3, p. 124-135

Facile disulfide bond cleavage in gaseous peptide and protein cations by ultraviolet photodissociation at 157 nm

Fung, Y. M. E., Kjeldsen, F., Silivra, O. A., Chan, T. W. D. & Zubarev, R. A., 7. Oct 2005, In: Angewandte Chemie International Edition. 44, 39, p. 6399-403 5 p.

Dissociation of peptide ions by fast atom bombardment in a quadrupole ion trap

Misharin, A. S., Silivra, O. A., Kjeldsen, F. & Zubarev, R. A., 9. Aug 2005, In: Rapid Communications in Mass Spectrometry. 19, 15, p. 2163-2171 9 p.

Electron-ion fragmentation reactions in multipolar radiofrequency fields

Zubarev, R., Kjeldsen, F., Ivonin, I., Silivra, O., Roman, Z., Igor, I. & Oleg, S., 2. Mar 2005, IPC No. H01J 49/ 42 A I, Patent No. GB2405526, Priority date 20. Aug 2003, Priority No. US20030644648

C α -C backbone fragmentation dominates in electron detachment dissociation of gas-phase polypeptide polyanions

Kjeldsen, F., Silivra, O. A., Ivonin, I. A., Haselmann, K. F., Gorshkov, M. & Zubarev, R. A., 2005, In: Chemistry: A European Journal. 11, 6, p. 1803-1812

Proteomics-grade de novo sequencing approach

Savitski, M. M., Nielsen, M. L., Kjeldsen, F. & Zubarev, R. A., 2005, In: Journal of Proteome Research. 4, 6, p. 2348-54 7 p.

Physicochemical Properties Determining the Detection Probability of Tryptic Peptides in Fourier Transform Mass Spectrometry: A Correlation Study

Nielsen, M. L., Savitski, M. M., Kjeldsen, F. & Zubarev, R. A., 1. Oct 2004, In: Analytical Chemistry. 76, 19, p. 5872-5877

Dissociative recombination cross section and branching ratios of protonated dimethyl disulfide and N-methylacetamide

Ai-Khaili, A., Thomas, R., Ehlerding, A., Hellberg, F., Geppert, W. D., Zhaunerchyk, V., Af Ugglas, M., Larsson, M., Uggerud, E., Vedde, J., Adlhart, C., Semaniak, J., Kamińska, M., Zubarev, R. A., Kjeldsen, F., Andersson, P. U., Österdahl, F., Bednarska, V. A. & Paál, A., 22. Sep 2004, In: Journal of Chemical Physics. 121, 12, p. 5700-5708 9 p.

Complete characterization of posttranslational modification sites in the bovine milk protein PP3 by tandem mass spectrometry with electron capture dissociation as the last stage

Kjeldsen, F., Haselmann, K. F., Budnik, B. A., Sørensen, E. S. & Zubarev, R. A., 2003, In: Analytical Chemistry. 75, 10, p. 2355-61 7 p.

Distinguishing of Ile/Leu amino acid residues in the PP3 protein by (hot) electron capture dissociation in Fourier transform ion cyclotron resonance mass spectrometry

Kjeldsen, F., Haselmann, K. F., Sørensen, E. S. & Zubarev, R. A., 2003, In: Analytical Chemistry. 75, 6, p. 1267-74 8 p.

Letter: The diagnostic value of amino acid side-chain losses in electron capture dissociation of polypeptides. Comment on: "Can the (M⁺-X) region in electron capture dissociation provide reliable information on amino acid composition of polypeptides?", Eur. J. Mass Spectrom. 8, 461-469 (2002)

Cooper, H. J., Håkansson, K., Marshall, A. G., Hudgins, R. R., Haselmann, K. F., Kjeldsen, F., Budnik, B. A., Polfer, N. C. & Zubarev, R. A., 2003, In: European Journal of Mass Spectrometry.

Secondary losses via γ -lactam formation in hot electron capture dissociation: A missing link to complete de Novo sequencing of proteins?

Kjeldsen, F. & Zubarev, R., 2003, In: Journal of the American Chemical Society.

Distinguishing of Ile and Leu residues in the PP3 protein by (hot) electron capture dissociation

Kjeldsen, F. & Zubarev, R. A., 1. Dec 2002, p. 103-104. 2 p.

Can the (M-X) region in electron capture dissociation provide reliable information on amino acid composition of polypeptides?

Haselmann, K. F., Budnik, B. A., Kjeldsen, F., Polfer, N. C. & Zubarev, R. A., 2002, In: European Journal of Mass Spectrometry. 8, 6, p. 461-469

Dissociative Capture of Hot (3-13 eV) Electrons by Polypeptide Polycations: An Efficient Process Accompanied by Secondary Fragmentation

Kjeldsen, F., Haselmann, K. F., Budnik, B. A., Jensen, F. & Zubarev, R. A., 2002, In: Chemical Physics Letters. 356, p. 201-206

Electronic excitation gives informative fragmentation of polypeptide cations and anions

Haselmann, K. F., Budnik, B. A., Kjeldsen, F., Nielsen, M. L., Olsen, J. V. & Zubarev, R. A., 2002, In: European Journal of Mass Spectrometry. 8, p. 117-121

Towards an understanding of the mechanism of electron-capture dissociation: A historical perspective and modern ideas

Zubarev, R. A., Haselmann, K. F., Budnik, B., Kjeldsen, F. & Jensen, F., 2002, In: European Journal of Mass Spectrometry. 8, p. 337-349

Improved low-energy electron injection systems for high rate electron capture dissociation in Fourier transform ion cyclotron resonance mass spectrometry

Tsybin, Y. O., Hkansson, P., Budnik, B. A., Haselmann, K. F., Kjeldsen, F., Gorshkov, M. & Zubarev, R. A., 2001, In: Rapid Communications in Mass Spectrometry.

Quantitative analysis of aroma compounds in carrot (*Daucus carota* L.) cultivars by capillary gas chromatography using large-volume injection technique

Kjeldsen, F., Christensen, L. P. & Edelenbos, M., 2001, In: Journal of Agricultural and Food Chemistry. 49, 9, p. 4342-4348 7 p., jf010213n.

Activities**Uppsala University (External organisation)**

Frank Kjeldsen (Member)

12. Sep 2013

UPPCON 2007

Frank Kjeldsen (Participant)

3. Dec 2007 → 7. Aug 2008

University of Southern Denmark (External organisation)

Frank Kjeldsen (Chairman)

22. Sep 2013 → 22. Jan 2014

University of Copenhagen (External organisation)

Frank Kjeldsen (Member)

9. Jan 2014

universitetspædagogikum

Frank Kjeldsen (Participant)

11. Jan 2010 → 12. Jan 2010

Toxicity of Silver Nanoparticles

Frank Kjeldsen (Guest lecturer)

Nov 2019 → ...

The IV International Caparica Conference in Analytical Proteomics 2015

Frank Kjeldsen (Participant)

7. Sep 2015 → 9. Sep 2015

Swedish Mass Spectrometry Society annual symposium

Frank Kjeldsen (Participant)

5. Oct 2014 → 7. Oct 2014

SuperQuant: A data processing algorithm for increasing quantitative proteome coverage in complex protein samples

Frank Kjeldsen (Lecturer)
7. Sep 2015 → 9. Sep 2015

SuperQuant: A Data Pre-Processing Algorithm for Increasing Quantitative Proteome Coverage

Frank Kjeldsen (Other)
26. Oct 2015

SEAGal: the method to fish for uncommon phosphorylations

Frank Kjeldsen (Speaker)
28. Aug 2018

Research Management Course - Uddannelse for forskningsledere

Frank Kjeldsen (Participant)
8. Nov 2017 → 19. Jan 2018

Protection of Labile Phosphate Ester Groups by Novel Metal Complex Chemistry

Frank Kjeldsen (Lecturer)
20. Nov 2012

Protection of Labile Phosphate Ester Groups by Novel Metal Complex Chemistry

Frank Kjeldsen (Lecturer)
27. May 2014

Projektleidelse for forskere

Frank Kjeldsen (Participant)
15. Apr 2010 → 27. May 2010

Panum (External organisation)

Frank Kjeldsen (Member)
15. Jan 2013

NanoTox 2018

Frank Kjeldsen (Participant)
18. Sep 2018 → 21. Sep 2018

nano

Frank Kjeldsen (Participant)
22. Feb 2011

Mass Spectrometry Reviews (Journal)

Frank Kjeldsen (Peer reviewer)
6. Sep 2011

Mass spectral interrogation and novel chemical solutions to proteomics studies

Frank Kjeldsen (Lecturer)
19. Jan 2012 → 20. Jan 2012

LMC Congress Food in Front

Frank Kjeldsen (Participant)
23. May 2011 → 24. May 2011

konference

Frank Kjeldsen (Participant)
24. Oct 2010 → 27. Oct 2010

Keynote: Investigating the chemistry of metals to advance methods for mass spectrometric analysis of phosphate containing biomolecules

Frank Kjeldsen (Lecturer)

7. Oct 2014

Journal of Proteome Research (Journal)

Frank Kjeldsen (Editor)

1. Jan 2010

Journal of proteome research (Journal)

Frank Kjeldsen (Editor)

1. Jan 2010

Journal of Agricultural and Food Chemistry (Journal)

Frank Kjeldsen (Peer reviewer)

14. Sep 2011

IMSC 2018

Frank Kjeldsen (Participant)

26. Aug 2018 → 31. Aug 2018

imsc 2014 - 20th International Mass Spectrometry Conference

Frank Kjeldsen (Participant)

29. Aug 2014

imsc 2014 - 20th International Mass Spectrometry Conference

Frank Kjeldsen (Participant)

24. Aug 2014 → 29. Aug 2014

Improving Protein Identifications by Utilization of Amino Acid Composition Information Extracted from High-mass Accuracy ETD and HCD Spectra

Frank Kjeldsen (Lecturer)

8. Nov 2011 → 9. Nov 2011

HUPO 2017

Frank Kjeldsen (Participant)

17. Sep 2017 → 21. Sep 2017

HUPO 2015

Frank Kjeldsen (Participant)

26. Sep 2015 → 30. Sep 2015

Foredrag: Application of proteomics in the characterization of nano-bio interactions

Frank Kjeldsen (Guest lecturer)

25. Nov 2020

Foredrag

Frank Kjeldsen (Guest lecturer)

May 2020 → ...

European Research Council (External organisation)

Frank Kjeldsen (Participant)

3. Dec 2014

Electrons – the Magic Bullets in Mass Spectrometry

Frank Kjeldsen (Guest lecturer)

15. Nov 2010

DAPSOC

Frank Kjeldsen (Participant)

3. Dec 2013

Dansk Selskab for Massespektrometri

Frank Kjeldsen (Participant)

21. Jan 2010 → 22. Jan 2010

Charge Inversion of Phospholipids by Dimetal Complexes for Positive Ion-mode Mass Spectrometry

Frank Kjeldsen (Lecturer)

30. Nov 2015

Censor ved NAT501

Frank Kjeldsen (Censor)

24. Jun 2010 → 25. Jun 2010

Can nanoparticles disturb human cell biology?

Frank Kjeldsen (Lecturer)

7. Jun 2018

Biological mass spectrometry in proteomics

Frank Kjeldsen (Lecturer)

28. Oct 2009

Assessment of nano-bio interactions and characterization of nanoparticle corona using proteomics

Frank Kjeldsen (Lecturer)

4. Dec 2018

American Society for Mass Spectrometry

Frank Kjeldsen (Participant)

9. Jun 2013 → 13. Jun 2013

Analytical Chemistry (Journal)

Frank Kjeldsen (Editor)

1. Jan 2010

Analytical Chemistry (Journal)

Frank Kjeldsen (Editor)

1. Jan 2010

American Society of Mass Spectrometry

Frank Kjeldsen (Participant)

2. Jun 2007 → 7. Feb 2008

American Society for Mass Spectrometry

Frank Kjeldsen (Participant)

30. May 2009 → 4. Jun 2009

American Society for mass spectrometry

Frank Kjeldsen (Participant)
30. May 2010 → 3. Jun 2010

Adjunkt bedømmelse (External organisation)

Frank Kjeldsen (Member)
2011

6th International Singapore Lipid Symposium

Frank Kjeldsen (Participant)
30. Nov 2015 → 2. Dec 2015

"Kan nanopartikler påvirke menneskeceller"?

Frank Kjeldsen (Lecturer)
23. May 2019

The fifth element in mass spectrometry-based proteomic studies

Frank Kjeldsen (Lecturer)
15. Dec 2009

Frank Kjeldsen

Department of Biochemistry and Molecular Biology

Postal address:

Campusvej 55

5230

Odense M

Denmark

Email: frankk@bmb.sdu.dk

Phone: 65502439