

Stacey Ristinmaa Sörensen
Synchrotron Radiation Research
Pufendorf Institute for Advanced Studies
LTH Profile Area: Photon Science and Technology
LU Profile Area: Light and Materials



Type of address: Visiting address.

Sölvegatan 1B
Rm K511-512
223 64
Lund
Sweden

Type of address: Postal address.

Box 118
221 00
Lund
Sweden

Type of address: Visiting address.

Biskopsgatan 3
Rm 207 C, Pufendorfinstitutet
Lund
Sweden

Type of address: Postal address.

Box 117
221 00
Lund
Sweden

Email: stacey.ristinmaa_sorensen@sljus.lu.se

Phone: +46462226210, +46462227265

Qualifications

Physics, PhD, Inner-shell radiationless transitions in atoms studied with synchrotron radiation, University of Oregon
1985 Mar 1 → 1989 Jul 1
Award Date: 1989 Oct 30

Spanish, B.A., Colby College
1979 Sept 1 → 1983 Jun 1
Award Date: 1983 Jun 1

Physics, B. A., Colby College
1979 Sept 1 → 1983 Jun 1
Award Date: 1983 Jun 1

Employment

Professor

Synchrotron Radiation Research
Lund University
Lund, Sweden
2002 May 15 → present

Director

Pufendorf Institute for Advanced Studies
Lund University
Lund, Sweden
2022 Jan 3 → present

Profile area member

LTH Profile Area: Photon Science and Technology
Lund University
Sweden
2022 Sept 14 → present

Profile area member

LU Profile Area: Light and Materials
Lund University
Sweden
2024 Jan 1 → present

Associate Professor

KTH Royal Institute of Technology
Stockholm SE-100 44, Sweden
1992 Jan 1 → 1995 May 1

Postdoctoral fellow

KTH Royal Institute of Technology
Stockholm SE-100 44, Sweden
1990 Jan 1 → 1992 Dec 31

Research outputs

Influence of Selective Carbon 1s Excitation on Auger–Meitner Decay in the ESCA Molecule

Fouda, A., Lindblom, V., Southworth, S. H., Doumy, G., Ho, P., Young, L., Cheng, L. & Sorensen, S. L., 2024 Apr 24, In: *Journal of Physical Chemistry Letters*. 15, 16, p. 4286-4293 8.

Experimental and theoretical near-edge x-ray-absorption fine-structure studies of NO⁺

Lindblad, R., Kjellsson, L., De Santis, E., Zamudio-Bayer, V., Von Issendorff, B., Sorensen, S. L., Lau, J. T., Hua, W., Carravetta, V., Rubensson, J. E., Ågren, H. & Couto, R. C., 2022 Oct, In: *Physical Review A*. 106, 4, 042814.

The origin of enhanced O₂⁺ production from photoionized CO₂ clusters

Ganguly, S., Barreiro, D., Walsh, N., Oostenrijk, B., Sorensen, S. L., Díaz-Tendero, S. & Gisselbrecht, M., 2022 Feb 4, In: *Communications Chemistry*.

Site-dependent nuclear dynamics in core-excited butadiene

Oghbaie, S., Gisselbrecht, M., Walsh, N., Oostenrijk, B., Laksman, J., Månsson, E. P., Sankari, A., Eland, J. H. D. & Sorensen, S. L., 2022, In: *Physical chemistry chemical physics : PCCP*. 24, 47, p. 28825-28830 6 p.

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Couto, R. C., Hua, W., Lindblad, R., Kjellsson, L., Sorensen, S. L., Kubin, M., Bülow, C., Timm, M., Zamudio-Bayer, V., Von Issendorff, B., Söderström, J., Lau, J. T., Rubensson, J. E., Ågren, H. & Carravetta, V., 2021 Aug, In: *Physical Chemistry Chemical Physics*. 23, 32, p. 17166-17176 11 p.

Non-radiative decay and fragmentation in water molecules after 1a₁⁻¹4a₁ excitation and core ionization studied by electron-energy-resolved electron-ion coincidence spectroscopy

Sankari, A., Stråhlman, C., Sankari, R., Partanen, L., Laksman, J., Kettunen, J. A., Galván, I. F., Lindh, R., Malmqvist, P. Å. & Sorensen, S. L., 2020 Feb 21, In: *Journal of Chemical Physics*. 152, 7, 074302.

Deepening into the nucleation and fission processes of nano-hydrated ammonia clusters - A combined theoretical and experimental study

Barreiro, D., Oostenrijk, B., Walsh, N., Sankari, A., Månsson, E. P., Maclot, S., Sorensen, S., Díaz-Tendero, S. & Gisselbrecht, M., 2020, *Clusters / Nanosystems / Surfaces / Solids*. 20 ed. Vol. 1412. 202030. (Journal of Physics: Conference Series).

From synchrotrons for XFELs: The soft x-ray near-edge spectrum of the ESCA molecule

Sorensen, S. L., Zheng, X., Southworth, S. H., Patanen, M., Kokkonen, E., Oostenrijk, B., Travnikova, O., Marchenko, T., Simon, M., Bostedt, C., Doumy, G., Cheng, L. & Young, L., 2020, In: *Journal of Physics B: Atomic, Molecular and Optical Physics*. 53, 24, 244011.

The carbon and oxygen K-edge NEXAFS spectra of CO⁺

Couto, R. C., Kjellsson, L., Ågren, H., Carravetta, V., Sorensen, S. L., Kubin, M., Bülow, C., Timm, M., Zamudio-Bayer, V., Von Issendorff, B., Lau, J. T., Söderström, J., Rubensson, J. E. & Lindblad, R., 2020, In: *Physical Chemistry Chemical Physics*. 22, 28, p. 16215-16223 9 p.

X-Ray Absorption Spectrum of the N₂⁺ Molecular Ion

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Tin-oxide nanoparticles deposited from a beam: what happens to the composition?

Tchaplyguine, M., Wright, C., Shavorskiy, A., Zhu, S., Mikkela, M. H., Zhang, C., Björneholm, O., Mårsell, E., Mikkelsen, A., Sorensen, S., Hetherington, C. J. D. & Wallenberg, L. R., 2019, In: *Physical chemistry chemical physics : PCCP*. 21, 11, p. 6287-6295 9 p.

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The role of charge and proton transfer in fragmentation of hydrogen-bonded nanosystems: The breakup of ammonia clusters upon single photon multi-ionization

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Dissociation of cyclopropane in double ionization continuum

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Preparing the MAX IV storage rings for timing-based experiments

Strahlman, C., Olsson, T., Leemann, S., Sankari, R. & Ristinmaa Sorensen, S., 2016, *PROCEEDINGS OF THE 12TH INTERNATIONAL CONFERENCE ON SYNCHROTRON RADIATION INSTRUMENTATION – SRI2015*. Shen, Q. & Nelson, C. (eds.). New York, NY USA: American Institute of Physics (AIP), Vol. 1741. 020043. (AIP conference proceedings; no. 1741).

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Dissociative double-photoionization of butadiene in the 25-45 eV energy range using 3-D multi-coincidence ion momentum imaging spectrometry

Oghbaie, S., Gisselbrecht, M., Laksman, J. & Ristinmaa Sörensen, S., 2015, In: *Journal of Chemical Physics*. 143, 11, p. 114309-114309

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Molecular dynamics of NH₃ induced by core-electron excitation

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Workshop on Timing Modes for Low-Emittance Storage Rings

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Probing electron correlation on the attosecond time scale

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Bringing physics, synchrotron light and probing neutrons to the public: a collaborative outreach

Micklavzina, S., Almqvist, M. & Ristinmaa Sörensen, S., 2014, In: *Physics Education*. 49, 2, p. 221-230

Carbon dioxide ion dissociations after inner shell excitation and ionization: The origin of site-specific effects.

Eland, J. H. D., Zagorodskikh, S., Squibb, R. J., Mucke, M., Ristinmaa Sörensen, S. & Feifel, R., 2014, In: *Journal of Chemical Physics*. 140, 18, 184305.

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Multi-purpose two- and three-dimensional momentum imaging of charged particles for attosecond experiments at 1 kHz repetition rate.

Månsson, E., Ristinmaa Sörensen, S., Arnold, C., Kroon, D., Guenot, D., Fordell, T., Lépine, F., Johnsson, P., L'Huillier, A. & Gisselbrecht, M., 2014, In: *Review of Scientific Instruments*. 85, 12, 123304.

Nuclear dynamics of 1,3 trans butadiene after inner-valence and core excitation probed by 3D multiple ion imaging

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Sankari, A., Stråhlman, C., Laksman, J., Sankari, R., Kettunen, A., Partanen, L., Malmqvist, P.-Å. & Ristinmaa Sörensen, S., 2013.

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Charge migration and decay of doubly charged ammonia clusters

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Experimental methods and modeling techniques for description of cell population heterogeneity

Lencastre Fernandes, R., Nierychlo, M., Lundin, L., Pedersen, H. A. E., Puentes Tellez, P. E., Dutta, A. K., Carlquist, M., Bolic, A., Schäpper, D., Brunetti, A. C., Helmark, S., Heins, A.-L., Jensen, A. D., Nopens, I., Rottwitt, K., Szita, N., van Elsas, J. D., Nielsen, P. H., Martinussen, J. & Sørensen, S. J. & 2 others, Lantz, A. E. & Gernaey, K. V., 2011 Nov, In: Biotechnology Advances. 29, 6, p. 575-599 25 p.

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Andersson, T., Zhang, C., Rosso, A., Bradeanu, I., Legendre, S., Canton, S., Tchapyguine, M., Öhrwall, G., Ristinmaa Sörensen, S., Svensson, S., Mårtensson, N. & Björneholm, O., 2011, In: Journal of Chemical Physics. 134, 9, 094511.

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Burmeister, F., Coutinho, L. H., Marinho, R. R. T., Homem, M. G. P., de Moraes, M. A. A., Mocellin, A., Björneholm, O., Ristinmaa Sörensen, S., Fonseca, P. T., Lindgren, A. & Naves de Brito, A., 2010, In: Journal of Electron Spectroscopy and Related Phenomena. 180, 1-3, p. 6-13

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Tanaka, T., Feifel, R., Kitajima, M., Tanaka, H., Ristinmaa Sörensen, S., Sankari, R., De Fanis, A., Piancastelli, M.-N., Karlsson, L. & Ueda, K., 2008, In: Physical Review A (Atomic, Molecular and Optical Physics). 78, 2

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The O 1s photoelectron spectrum of molecular oxygen revisited

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Direct observation of the non-supported metal nanoparticle electron density of states by X-ray photoelectron spectroscopy

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Electronic Doppler effect in resonant Auger decay of CO molecules upon excitation near a shake-up π resonance

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Size determination of free metal clusters by core-level photoemission from different initial charge states

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League of European Research Universities New Year's Dinner Debate: Man vs Machine

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Knowledge-driven societal development in university cities

Ristinmaa Sörensen, S. (Invited speaker)
2016 Mar 18

Workshop on timing modes for low-emittance storage rings.

Ristinmaa Sörensen, S. (Role not specified)
2015 Mar 25 → 2015 Mar 27