Dr. Sven Tougaard got the MS (1975) at the Technical University in Denmark, and the PhD (1978) and dr. scient (1987) degrees in theoretical and experimental surface physics at Odense University in Denmark. He was post. doc. in USA and Germany (1978-84) and professor at University of Southern Denmark since 1984. He founded the software company QUASES-Tougaard Inc. (1994) which develops and sells software for characterization of the composition and electronic properties of surface nanostructures by X-ray photoelectron spectroscopy (XPS) and reflection electron energy loss spectroscopy (REELS). Prof. Tougaard got the Fyns Stitstidendes Research Prize in 1987, the Rivière Prize awarded by the UK Surface Analysis Forum in 2007, “for work which has been judged outstanding in its continuing and lasting contribution to surface analysis”, and the Albert Nerken Award by the American Vacuum Society in 2012 “for contributions to the development of improved methods to characterize thin-film nanostructures by X-ray photoelectron spectroscopy”. His current research focuses on experimental and theoretical studies of phenomena induced by the electron-solid interaction at surfaces and in nano-structures and development of theory for practical experimental methods to determine the chemical composition and electronic properties of nano-structures by electron spectroscopy. He has conducted and participated in several EU supported international projects on these subjects, published more than 200 scientific papers which are cited more than 5000 times with an H-index = 35 and presented more than 50 invited talks at international conferences and workshops. He has a long-standing active scientific collaboration with several research institutes in Europe, USA, Korea and Japan. He is on the Steering Committee for ECASIA (European Conf. for Surface and Interface Analysis) (since 2002) and has served on the program committees and advisory boards for more than 20 international conferences and workshops. He serves on the editorial board for the journals: J. Electron Spectroscopy, Surface and Interface Anal., J. of Surface Analysis, and Surface Science Spectra.

Publikationer

Theoretical study toward rationalizing inelastic background analysis of buried layers in XPS and HAXPES
Zborowski, C. & Tougaard, S. M., 1. aug. 2019, I : Surface and Interface Analysis. 51, 8, s. 857-873

XPS primary excitation spectra of Zn 2p, Fe 2p, and Ce 3d from ZnO, α-Fe2O3, and CeO2
Pauly, N., Yubero, F., Espinós, J. P. & Tougaard, S., 1. mar. 2019, I : Surface and Interface Analysis. 51, 3, s. 353-360

Determination of the input parameters for inelastic background analysis combined with HAXPES using a reference sample

Impact of curing time on ageing and degradation of phenol-urea-formaldehyde binder

Improved XPS analysis by visual inspection of the survey spectrum
Tougaard, S. M., 2018, I : Surface and Interface Analysis. 50, 6, s. 657-666

Quantitative analysis of Yb 4d photoelectron spectrum of metallic Yb
Pauly, N., Yubero, F. & Tougaard, S. M., 2018, I : Surface and Interface Analysis. 50, 11, s. 1168-1173

Quantitative determination of elemental diffusion from deeply buried layers by photoelectron spectroscopy
Effective inelastic scattering cross-sections for background analysis in HAXPES of deeply buried layers

Novel applications of inelastic background XPS analysis: 3D imaging and HAXPES
Tougaard, S. M., 2017, I : Journal of Surface Analysis. 24, 2, s. 107-114

Optical properties and electronic transitions of zinc oxide, ferric oxide, cerium oxide, and samarium oxide in the ultraviolet and extreme ultraviolet

Thickness and structure of thin films determined by background analysis in hard X-ray photoelectron spectroscopy


Composition dependence of dielectric and optical properties of Hf-Zr-silicate thin films grown on Si(100) by atomic layer deposition

Determination of electronic properties of nanostructures using reflection electron energy loss spectroscopy: Nanometalized polymer as case study

Quantitative analysis of Ni 2p photoemission in NiO and Ni diluted in a SiO2 matrix

Quantitative analysis of reflection electron energy loss spectra to determine electronic and optical properties of Fe–Ni alloy thin films

Quantitative analysis of satellite structures in XPS spectra of gold and silver

Quantitative spectromicroscopy from inelastically scattered photoelectrons in the hard X-ray range

Effects of cation compositions on the electronic properties and optical dispersion of indium zinc tin oxide thin films by electron spectroscopy

Primary excitation spectra in XPS and AES of Cu, CuO: Relative importance of surface and core hole effects
Pauly, N. & Tougaard, S. M., 2015, I : Surface Science. 641, s. 326-329

Determination of the Cu 2p primary excitation spectra for Cu, Cu2O and CuO
Tougaard, S. M., 2014, I : Surface Science. 620, s. 17-22
Electronic and optical properties of Fe, Pd, and Ti studied by reflection electron energy loss spectroscopy

Inelastic background analysis of HAXPES spectra: towards enhanced bulk sensitivity in photoemission
Tougaard, S. M., 2014, I : Surface and Interface Analysis. 46, s. 906-910 5 s.

LMM Auger primary excitation spectra of copper
Tougaard, S. M., 2014, I : Surface Science. 630, s. 294-299 6 s.

Modeling of X-ray photoelectron spectra-surface and core hole effects

Morphology of Ferromagnetic Cobalt Nanoparticles Grown on Al2O3 (0001) by Pulsed Laser Deposition
Tougaard, S. M., 2014, I : Journal of Advanced Microscopy Research. 8, p. 1-6, s. 1-6 6 s.

Probing deeper by Hard X-ray Photoelectron Spectroscopy

The growth of cobalt oxides on HOPG and SiO2 surfaces: A comparative study

Effects of gas environment on electronic and optical properties of amorphous indium zinc tin oxide thin films

Evaluation of robustness to surface conditions of the target factor analysis method for determining the dielectric function from reflection electron energy loss spectra: Application to GaAs
Tougaard, S. M., 2013, I : Surface and Interface Analysis. 45, s. 985-992 8 s.

Factor analysis and advanced inelastic background analysis in XPS: Unraveling time dependent contamination growth on multilayers and thin films
Tougaard, S. M., 2013, I : Surface Science. 616, s. 161-165 5 s.

Sample-morphology effects on x-ray photoelectron peak intensities

Surface excitation parameter for allotropic forms of carbon
Tougaard, S. M., 2013, I : Surface and Interface Analysis. 45, s. 811-816

Three-Dimensional X-Ray Photoelectron Tomography on the Nanoscale: Limits of Data Processing by Principal Component Analysis
Hajati, S., Walton, J. & Tougaard, S., 2013, I : Microscopy and Microanalysis. 19, 3, s. 751-760

Validity of automated x-ray photoelectron spectroscopy algorithm to determine the amount of substance and the depth distribution of atoms

X-ray Photoelectron Spectroscopy-Elsevier Reference Module in Chemistry, Molecular Sciences and Chemical Engineering
Comparison between surface excitation parameter obtained from QUEELS and SESINIPAC
Tougaard, S. M., 2012, I: Surface and Interface Analysis. 44, s. 1147-1150

Dielectric description of the angular dependence of the loss structure in core level photoemission
Tougaard, S. M., 2012, I: Journal of Electron Spectroscopy and Related Phenomena. 185, s. 552-558

Electronic and optical properties of Cu, CuO and Cu2O studied by electron spectroscopy

Electronic and optical properties of hafnium indium zinc oxide thin film by XPS and REELS

Electronic and optical properties of selected polymers studied by reflection electron spectroscopy

Reflection electron energy loss spectroscopy for ultrathin gate oxide materials
Tougaard, S. M., 2012, I: Surface and Interface Analysis. 44, s. 623-627 5 s.

Software package to calculate the effects of the core hole and surface excitations on XPS and AES
Tougaard, S. M., 2012, I: Surface and Interface Analysis. 44, s. 1114-1118 5 s.

Controlled adhesion of Salmonella Typhimurium to poly(oligoethylene glycol methacrylate) grafts
Mrabet, B., Mejbri, A., Machouche, S., Gam-Derouich, S., Turmine, M., Mechoyet, M., Lang, P., Bakala, H., Bakrouf, A.,
Tougaard, S. M. & Chehimi, M. M., 2011, I: Surface and Interface Analysis. 43, 11, s. 1436-1443

Core hole and surface excitation correction parameter for XPS peak intensities
Tougaard, S. M., 2011, I: Surface Science. 605, s. 1556-1562 7 s.

Dielectric response functions of the (0001), and (1013) GaN single crystalline and disordered surfaces studied by
reflection electron energy loss spectroscopy

Experimental verification of the shape of the excitation depth distribution function for AES
Vacuum, Surfaces, and Films. A29, s. 051401-1 to 051401-10 11 s.

On the ultrathin gold film used as buffer layer at the transparent conductive anode/organic electron donor interface

Energy loss in XPS: Fundamental processes and applications for quantification, non-destructive depth profiling and 3D
imaging

XPS for non-destructive depth profiling and 3D imaging of surface nanostructures
Tougaard, S. M., 1. jan. 2010, I: Analytical and Bioanalytical Chemistry. 396, s. 2741-2755 15 s.

An Application for Near Real-time Analysis of XPS Data
Tougaard, S. M., 2010, I: Surface and Interface Analysis. 42, s. 1061-1065

Electronic and Optical Properties of Al2O3/SiO2 Thin Films grown on Si Substrate
Electronic and optical properties of GIZO thin film grown on SiO2/Si substrates
Tougaard, S. M., 2010, I : Surface and Interface Analysis. 42, s. 906-910

Electronic and Optical Properties of La-aluminate Thin Films on Si (100)
Tougaard, S. M., 2010, I : Surface and Interface Analysis. 42, s. 1566-1569 4 s.

Energy loss function for Si determined from reflection electron energy loss spectra with factor analysis method
Tougaard, S. M., 2010, I : Surface and Interface Analysis. 42, s. 1076-1081 6 s.

Measurement of optical constants of Si and SiO2 from reflection electron energy loss spectra using factor analysis method

Model for Monte Carlo simulations of reflection electron energy loss spectra applied to Silicon at energies between 300 and 2000 eV
Tougaard, S. M., 2010, I : Surface and Interface Analysis. 42, s. 1100-1104

Surface and core hole effects in X-ray photoelectron spectroscopy
Tougaard, S. M., 2010, I : Surface Science. 604, s. 1193 1196 s.

Surface excitation parameter for 12 semiconductors and determination of a general predictive formula
Tougaard, S. M., 2010, I : Surface and Interface Analysis. 41, 9, s. 735-740 6 s.

Determination of the effective surface region thickness and of Begrenzungseffect
Tougaard, S. M., 1. maj 2009, I : Surface Science. 603, s. 2158-2162 5 s.

Dielectric and optical properties of Zr silicate thin films grown on Si(100) by atomic layer deposition

Surface excitation parameter for selected polymers
Tougaard, S. M., 1. jan. 2009, I : Surface and Interface Analysis. 41, s. 23-26 4 s.

Monte Carlo simulations of reflection electron energy loss spectra for Silicon and energies between 300 and 2000 eV

Angular and Energy Dependences of Reflection Electron Energy Loss Spectra of Si

Electronic and Optical Properties of La-aluminate Thin Films on Si (100)

Handbook of Surface and Interface Analysis: Methods for Problem-Solving
Tougaard, S. M., 2009, 2 udg. FL USA: Taylor & Francis. 651 s.

Inelastic Scattering Cross Section of Si Determined from Angular Dependent Reflection Electron Energy Loss Spectra

Non-Destructive Depth Profiling by XPS Peak Shape Analysis
Tougaard, S. M., 2009, I : Journal of Surface Analysis. 15, 3, s. 220-224 5 s.
First nucleation steps of nickel nanoparticle growth on Al2O3 (0001) studied by XPS inelastic peak shape analysis

Growth mechanism of iron nanoparticles on (0001) sapphire wafers

Noise reduction procedures applied to XPS imaging of depth distribution of atoms on the nanoscale
Tougaard, S., 15. sep. 2008, I: Surface Science. 602, 18, s. 3064-3070 7 s.

Erratum: Validity of Yubero-Tougaard theory to quantitatively determine the dielectric properties of surface nanofilms

Determination of the surface excitation parameter for oxides: TiO2, SiO2, ZrO2 and Al2O3

Test of validity of the V-type approach for electron trajectories in reflection electron energy loss spectroscopy

Validity of Yubero-Tougaard theory to quantitatively determine the dielectric properties of surface nanofilms

Calculation of the angular distribution of the surface excitation parameter for Ti, Fe, Cu, Pd, Ag, and Au
Tougaard, S., 2008, I: Surface and Interface Analysis. 40, s. 731-733 4 s.

Nondestructive quantitative XPS imaging of depth distribution of atoms on the nanoscale
Tougaard, S., 2008, I: Surface and Interface Analysis. 40, s. 688-691 5 s.

Theoretical determination of the surface excitation parameter for Ti, Fe, Cu, Pd, Ag, and Au
Tougaard, S., 2008, I: Surface Science. 601, s. 5611-5615 6 s.

Characterization of Au nano-cluster formation on and diffusion in polystyrene using XPS peak shape analysis
Tougaard, S., 2007, I: Surface Science. 610, s. 3261-3267

Electronic properties of ultrathin (HfO2)x (SiO2)1-x dielectrics on Si(100)
Tougaard, S., 2007, I: Oyo Buturi. 102, 5, s. 053709-053709-6 7 s.

Penetration of flourine into the silicon lattice during exposure to F atoms, F2, and XeF2: Implications for spontaneous etching reactions

Theoretical Determination of the surface excitation parameter for Ti, Fe, Cu, Pd, Au, and Au
Tougaard, S., 2007, I: Surface Science. 601, 23, s. 5611-5615

Intrinsic and extrinsic excitations in deep core photoelectron spectra of solid Ge

Oscillating Surface Effect in Reflection-electron energy loss spectra
Quantification and IMFP determination of multilayer Langmuir-Blodgett films by AFM and XPS measurements
Sato, M., Tsukamoto, N., Shiratori, T., Furusawa, T., Suzuki, N. & Tougaard, S., 2006, I: Surface and Interface Analysis. 38, s. 604-609

Quantitative analysis of reflection electron energy loss spectra for ultra-thin HfO\textsubscript{2}, Al\textsubscript{2}O\textsubscript{3} and Hf-Al-O dielectric films on Si(100)
Jin, H., Oh, S. K., Kang, H. J. & Tougaard, S., 2006, I: Oyo Buturi. 100, s. 083713

Tests of algorithms for angle-resolved XPS

Theoretical Determination of the Surface Excitation Parameter from X-ray Photoelectron Spectroscopy
Pauli, N., Tougaard, S. & Yubero, F., 2006, I: Surface and Interface Analysis. 38, s. 672-675

What nano-physical properties can be determined by analysis of elastic peak accompanied by its inelastic background tail in XPS and AES spectra?
Hajati, S. & Tougaard, S., 2006, I: Journal of Surface Analysis. 13, s. 148-155

XPS imaging of depth profiles and amount of substance based on Tougaard's algorithm
Hajati, S., Coultas, S., Blomfield, C. & Tougaard, S., 2006, I: Surface Science. s. 3015-3021

Algorithm for Automatic XPS Data Processing and XPS-imaging

Electron backscattering from surfaces: Azimuth-resolved distributions
Glazov, L. & Tougaard, S., 2005, I: PHYSICAL REVIEW. 72, 085406.

Quantification of plasmon excitations in core-level photoemission
Yubero, F. & Tougaard, S., 2005, I: Physical Review B. 71, s. 045414

Test of Dielectric Response Model for Energy and Angular Dependence of Plasmon Excitations in Core Level Photoemission
Yubero, F., Kover, L., Drube, W., Eickhoff, T. & Tougaard, S., 2005, I: Surface Science. 592, s. 1-7

Theoretical Study of the Surface Excitation Parameter from Reflection-Electron-Energy-Loss-Spectra
Pauli, N., Tougaard, S. & Yobero, F., 2005, I: Surface and Interface Analysis. 37, s. 1151-1157

Contribution of intrinsic and extrinsic excitations to KLL Auger spectra induced from Ge films.

Pulsed laser deposition of aluminum-doped ZnO films at 355 nm.

QUEELS Software Package for Calculation of Surface Effects in Electron Spectra.
Tougaard, S. & Yubero, F., 2004, I: Surface and Interface Analysis. 36, s. 824-827

Surface Analysis: (b) X-ray Photoelectron Spectroscopy.
Surface Roughness and Island Formation effects in ARXPS quantification.
Martin-Concepción, A. I., Yubero, F., Espinos, J. P., Garcia, J. & Tougaard, S., 2004, I : Surface and Interface Analysis. 36 , s. 788-792

The Use of QUASESTM/XPS Measurements to Determine the Oxide Composition and Thickness on an Iron Substrate

Determination of amount of substance on the nanometer range consistency between XPS, RBS and XRF quantification

Electron Backscattering from Surfaces; Invariant Embedding Approach

Experimental determination of inelastic scattering cross-sections of Si, Ge and III-V semiconductors 2003
Orosz, G. T., Gergely, G., Gurban, S., Menyhard, M., Toth, J., Varga, D. & Tougaard, S., 2003, I : Zhenkong. 71, s. 147-152

Quantification of Nano-structures by Electron Spectroscopy

XPS Study of First Stages of ZnO Growth and Nano-structure Dependence of the Polarization Effects at ZnO/SiO2 and ZnO/Al2O3 Interfaces

Surface morphology of SiO2 on a Si(111) 7×7 surface formed after alternating exposure to caesium and oxygen and subsequent annealing

Comparison of source functions obtained by using QUASES and the Partial Intensity Analyses for inelastic background correction: KLL Auger spectra of 3d transition elements Cu and Ni
Köver, L., Tougaard, S., Werner, W. S. M. & Cserny, I., 2002, I : Surface and Interface Analysis. 33, 8, s. 681-686

Comparison of the Tougaard, ARXPS, RBS and Ellipsometry methods to determine the thickness of thin SiO2 layers
Semak, B. S., Marel, C. V. D. & Tougaard, S., 2002, I : Surface and Interface Analysis. 33, s. 238-44

Deposition and characterization of ITO films produced by laser ablation at 355 nm

Determination of Inelastic Mean Free Path of High Energy Electrons from Shape Analysis of K- Auger and K- conversion Spectra Emitted from Thin Films
Köver, L., Tougaard, S., Toth, J., Varga, D., Dragoun, O., Koval'k, A. & Rysavy, M., 2002, I : Journal of Surface Analysis. 9 , s. 281-4
Experimental estimation of surface excitation parameter for surface analysis
Gergerly, G., Menyhard, M., Gurban, S., Sulyok, A., Toth, J., Varga, D. & Tougaard, S., 2002, I : Surface and Interface Analysis. s. 33; 410-3

Pure and Sn-doped ZnO films produced by pulsed laser deposition

Recent progress in silicon oxidation: Towards ultra thin oxides

Surface Morphology of SiO2 grown on a Si(111)7x7 surface by alternating exposure to Caesium and Oxygen and Subsequent Annealing

Determination of overlayer thickness by QUASES analysis of photon excited KLL Auger spectra of Ni and Cu films

Intercomparison of Methods for Separation of REELS Elastic Peak Intensities for Determination of IMFP

Practical Correction Procedures for Elastic Electron Scattering Effects in ARXPS

Probing the ex situ morphology of Ge islands on Si(001): AFM and XPS inelastic peak shape analysis

Quantification of Well-characterized Langmuir-Blodgett Film by Analysis of the PeakShape of XPS taken at Different Emission Angles.
Suzuki, N., Kato, T. & Tougaard, S., 2001, I : Surface and Interface Analysis. 31, s. 862-8

Surface Excitation Effects in Electron Spectroscopy

Surface Morphology of PS-PDMS Diblock Copolymer Films

Analysis of angle-resolved electron energy loss in XPS spectra of Ag, Au, Co, Cu, Fe and Si
Simonsen, A. C., Youbero, F. & Tougaard, S., 1999, I : Surface Science. 436, 1, s. 149–159


Nanostructure of Ge deposited on Si(001): a study by XPS peak shape analysis and AFM
Quantification of Au deposited on Ni: XPS peak shape analysis compared to RBS
Simonsen, A. C., Pehler, J. P., Jeynes, C. & Tougaard, S., 1999, I: Surface and Interface Analysis. 27, 1, s. 52-56 5 s.

Ge growth on Si(001) studied by x-ray photoelectron spectroscopy peakshape analysis and atomic force microscopy

Quantitative model of electron energy loss in XPS

Quantitative non-destructive analysis of surface nano-structures

Deconvolution of inelastic background signal from XPS spectra of homogeneous solids

Quantitative non-destructive in-depth composition information from XPS
Tougaard, S. M., 1986, I: Surface and Interface Analysis. 8, 6, s. 257-260

Mechanisms for oxygen adsorption on the Si(110) surface studied by Auger electron spectroscopy
Tougaard, S., Morgen, P. & Onsgaard, J., 2. nov. 1981, I: Surface Science. 111, 3, s. 545-554 10 s.

Electron Emission from Solids During Ion Bombardment: Theoretical Aspects

ADSORPTION OF N₂ ON W(100) UNDER LONG EXPOSURE.

Scandium and lutetium surfaces studied by reflection electron energy-loss spectroscopy
Onsgaard, J., Tougaard, S., Morgen, P. & Ryborg, F., 1. jan. 1980, I: Journal of Electron Spectroscopy and Related Phenomena. 18, 1, s. 29-41 13 s.

SCANDIUM, YTTRIUM AND LUTETIUM SURFACES STUDIED BY ELECTRON SPECTROSCOPY.
Onsgaard, J., Tougaard, S., Morgen, P. & Ryborg, F., 1. jan. 1980, s. 1361-1364. 4 s.

Observation of changes in the electronic density of states at a Si (111) surface during adsorption of oxygen by Auger electron spectroscopy

Segregation of impurities at the surface of a scandium single crystal
Onsgaard, J., Tougaard, S. & Morgen, P., 1. jan. 1979, I: Applications of Surface Science. 3, 1, s. 113-117 5 s.

Desorption from powdered ZnO during electron bombardment and interaction with atomic hydrogen
Morgen, P., Onsgaard, J. H. & Tougaard, S., 1. dec. 1977, I: Journal of Applied Physics. 48, 8, s. 3443-3447 5 s.

Conductivity of powdered ZnO with chemisorbed oxygen during photodesorption
Aktiviteter

Journal of Materials Chemistry (Tidsskrift)
Sven Mosbæk Tougaard (Redaktør)
1. jan. 2010

"Non-destructive characterization of nano-structures by analysis of the peak shape in photoelectron spectra"
Sven Mosbæk Tougaard (Foredragsholder)

"Quantitative XPS: effects of core-hole and surface excitations"
Sven Mosbæk Tougaard (Foredragsholder)
26. aug. 2010

"Simple universal curve for the energy dependent electron attenuation length for all materials" (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
2012 → …

> Industrial Application Division
Sven Mosbæk Tougaard (Gæsteforsker)

Invited talk at UKSAF meeting in Newcastle: "Quantitative XPS of surface nano-structures by analysis of the peak shape"
Sven Mosbæk Tougaard (Foredragsholder)
9. jan. 2007

Invited Talk held at Univ of Newcastle: "Characterization of morphology and electronic properties of surface nano-
structures by photo- and reflection electron spectroscopy"
Sven Mosbæk Tougaard (Foredragsholder)
10. jan. 2007

Invited talk at "Practical Surface Analysis 07" in Kanazawa Japan: "Algorithm for Automatic XPS Data Analysis:
Quantification of Surface Nano-structures and Application to 3D-XPS Imaging"
Sven Mosbæk Tougaard (Foredragsholder)
28. nov. 2007

Invited talk at ECASIA: "Nano-Structure Information from XPS; Automatic Data Analysis and 3D-Imaging"
Sven Mosbæk Tougaard (Foredragsholder)
21. okt. 2009

Invited talk: "Characterization of nano-structured polymers by XPS-peak shape analysis"
Sven Mosbæk Tougaard (Foredragsholder)
17. jan. 2010

REELS as a quantitative method to characterize the electronic properties of surface nano-structures
Sven Mosbæk Tougaard (Foredragsholder)
20. jun. 2007

Surface excitation parameter: Theoretical determination and application in Monte Carlo simulations
Sven Mosbæk Tougaard (Foredragsholder)
22. okt. 2009

Talk at "Samsung Advanced Institute of Technology", Seoul Korea: "Algorithm for Automatic XPS Data Analysis:
Quantification of Surface Nano-structures and Application to 3D-XPS Imaging"
Sven Mosbæk Tougaard (Foredragsholder)
10. jan. 2009
Talk at "American Vacuum Society 55th International Symposium": "3-Dimensional XPS Imaging of Surface Nano-structures; A New Technique"
Sven Mosbæk Tougaard (Foredragsholder)
22. okt. 2008

Talk at Chungbuk National University, Korea: "Algorithm for Automatic XPS Data Analysis: Quantification of Surface Nano-structures and Application to 3D-XPS Imaging"
Sven Mosbæk Tougaard (Foredragsholder)
19. mar. 2008

32nd European Conference On Surface Science (ECOSS-32)
Sven Mosbæk Tougaard (Arrangør)

6th International Conference on Theoretical and Applied Physics (6th ICTAP)
Sven Mosbæk Tougaard (Arrangør)

6th International Symposium on Flexible Organic Electronics
Sven Mosbæk Tougaard (Deltager)
7. jul. 2013 → 11. jul. 2013

7th International Symposium on Practical Surface Analysis (PSA-16)
Sven Mosbæk Tougaard (Arrangør)

A Near Real-time Data Analysis Package to Enhance the Information Extracted from XPS Spectra
Sven Mosbæk Tougaard (Andet)
25. aug. 2010

AIP The Journal of Chemical Physics (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
15. feb. 2011

American Vacuum Society 59th annual meeting
Sven Mosbæk Tougaard (Deltager)
2012

Analytical and Bioanalytical Chemistry (Tidsskrift)
Sven Mosbæk Tougaard (Redaktør)
1. jan. 2009

Analytical Sciences (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
2010

Applied Surface Science (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
8. mar. 2018

Applied Surface Science (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
1. okt. 2018
Arranged a Tutorial at Lokey Laboratories, University of Oregon: Using QUASES for Quantitative XPS and Auger Analysis of Surface Nanostructures
Sven Mosbæk Tougaard (Andet)
28. apr. 2009

Automated XPS analysis and XPS-Imaging of nano-structures
Sven Mosbæk Tougaard (Foredragsholder)
13. okt. 2010 → …

Bedømmelsedsudvalg for "Fonds de la Recherche Scientifique - FNRS", Belgium. (Ekstern organisation)
Sven Mosbæk Tougaard (Medlem)

Bedømmelsedsudvalg for "Fonds de la Recherche Scientifique - FNRS", Belgium. (Ekstern organisation)
Sven Mosbæk Tougaard (Medlem)
31. mar. 2010 → 15. apr. 2010

Ca 15 papers i 5 forskellige internationale tidsskrifter (Tidsskrift)
Sven Mosbæk Tougaard (Redaktør)
1. jan. 2007

Censor i Faststoffysik på Aarhus Universitet
Sven Mosbæk Tougaard (Censor)

Characterization of morphology of nano-structures by XPS
Sven Mosbæk Tougaard (Foredragsholder)
2. apr. 2014

Characterization of morphology of nano-structures by XPS
Sven Mosbæk Tougaard (Foredragsholder)
8. apr. 2014

Characterization of nano-structured materials with XPS-peak shape analysis
Sven Mosbæk Tougaard (Foredragsholder)
17. aug. 2010 → …

Characterization of nano-structured materials with XPS-peak shape analysis
Sven Mosbæk Tougaard (Foredragsholder)
20. aug. 2010
Combining high-resolution core-level and inelastic background analysis in HAXPES to investigate deeply buried interfaces
Sven Mosbæk Tougaard (Foredragsholder)
2. okt. 2015

Course: QUASES Analysis
Sven Mosbæk Tougaard (Underviser)
25. sep. 2018

Effective Attenuation Lengths for Photoelectrons in Thin Films of Silicon Oxynitride and Hafnium Oxynitride on Silicon
Sven Mosbæk Tougaard (Peer reviewer)
2012 → …
Extrinsic and intrinsic effects in XPS: Validity of the two-step model and corrections for surface and core-hole effects
Sven Mosbæk Tougaard (Foredragsholder)
3. aug. 2011

Extrinsic and Intrinsic Effects in XPS: Validity of the two-step model and corrections for surface and core-hole effects
Sven Mosbæk Tougaard (Foredragsholder)
13. okt. 2010 → …

Factor Analysis and Advanced Background Analysis methods to solve the problem of ... (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
2013 → …

Founder and director of the software company: "QUASES-Tougaard ApS" (Ekstern organisation)
Sven Mosbæk Tougaard (Medlem)
20. feb. 1994 → …

Gave a course for Industry and PhD students from USA, UK and central Europe
Sven Mosbæk Tougaard (Underviser)
22. mar. 2017

Gave a course for Industry and PhD students held at University of Surrey, UK: "SURFACE ANALYSIS: AN INTRODUCTION TO XPS, SCANNING AUGER MICROSCOPY AND SECONDARY ION MASS SPECTROMETRY": PhD kursus
Sven Mosbæk Tougaard (Underviser)
23. apr. 2007 → 27. apr. 2007

Gave a course for Industry and PhD students held at University of Surrey, UK: "Surface Analysis: XPS, Auger and SIMS": PhD kursus
Sven Mosbæk Tougaard (Foredragsholder)
18. mar. 2013 → 22. mar. 2013

Gave a course for Industry and PhD students held at University of Surrey, UK: "Surface Analysis: XPS, Auger and SIMS": Quantitative Analysis of Surfaces by Electron Spectroscopy' and software tutorial on applications of Quases-Tougaard software packages
Sven Mosbæk Tougaard (Foredragsholder)
24. mar. 2015 → 25. mar. 2015

Gave a one day course on quantitative XPS of nano-structured materials
Sven Mosbæk Tougaard (Underviser)
6. jul. 2017

Gave a workshop: XPS analysis using the QUASES-Tougaard software packages at the ECASIA conference
Sven Mosbæk Tougaard (Underviser)
27. sep. 2015

Growth of silver on ZnO and SnO2 thin films intended for low emissivity applications (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
2012

Hasanuddin University
Sven Mosbæk Tougaard (Gæsteforsker)
ICPPC-2010 International Conference on Polymer Processing and Characterization  
Sven Mosbæk Tougaard (Deltager)  
15. jan. 2010 → 19. jan. 2010

Imperial College Press, London: Electron Elastic Scattering and Inelastic Scattering in Surface Electron Spectroscopy  
(Tidsskrift)  
Sven Mosbæk Tougaard (Peer reviewer)  
4. okt. 2011

Institute Of Physics IOP Nanotechnology (Tidsskrift)  
Sven Mosbæk Tougaard (Redaktør)  
1. jan. 2008

Instituto de Ciencia de Materiales de Sevilla  
Sven Mosbæk Tougaard (Gæsteforsker)  
14. mar. 2010 → 19. mar. 2010

Instituto de Ciencia de Materiales de Sevilla  
Sven Mosbæk Tougaard (Gæsteforsker)  

International Congress on Materials and Renewable Energy (MRE 2013)  
Sven Mosbæk Tougaard (Deltager)  
1. jul. 2013 → 3. jul. 2013

Intrinsic and Extrinsic Excitations in XPS (and AES): Validity of the two-step model and corrections for surface and core hole effects  
Sven Mosbæk Tougaard (Foredragsholder)  
19. aug. 2010

Invited Albert Nerken Award lecture: "Characterization of thin-film nano-structures by XPS"  
Sven Mosbæk Tougaard (Foredragsholder)  
29. okt. 2012

Invited talk at NanoTech Insight 2007 Luxor, Egypt: "Characterization of morphology and electronic properties of surface nano-structures by photo- and reflection electron spectroscopy"  
Sven Mosbæk Tougaard (Foredragsholder)  
16. mar. 2007

Invited talk at workshop "Optimizing Information Content of X-ray Photoelectron Spectroscopy Analys" at University of Oregon, USA: "Quantitative and non-destructive in-depth analysis of surface nano-structures"  
Sven Mosbæk Tougaard (Foredragsholder)  
27. apr. 2009

Invited talk at "56th IUVSTA workshop: Electron Transport Parameters; Applications in Surface Analysis": "3-Dimensional XPS Imaging of Surface Nano-structures; A New Technique"  
Sven Mosbæk Tougaard (Foredragsholder)  
15. sep. 2008

INVITED TALK Novel Applications of Inelastic Background Analysis: HAXPES and 3D Imaging  
Sven Mosbæk Tougaard (Underviser)  
24. sep. 2018

Invited talk: "Analytical Approach for Quantitative Surface Chemical Analysis using AES and XPS"  
Sven Mosbæk Tougaard (Foredragsholder)  
2013
Invited talk: "Characterization of Nano-structures from Analysis of the XPS Background: Automation and 3D-imaging"
Sven Mosbæk Tougaard (Foredragsholder)
29. okt. 2011 → 5. nov. 2011

Invited talk: "Nano-structure Information from XPS; Automated data analysis and 3D-imaging"
Sven Mosbæk Tougaard (Foredragsholder)
4. okt. 2010

Invited talk: "Nano-Structure Information from XPS; Automated Data Analysis and 3D-Imaging"
Sven Mosbæk Tougaard (Taler)
24. aug. 2010

Invited talk: "Quantitative XPS: Getting the Most Out of Your Instrument"
Sven Mosbæk Tougaard (Underviser)
5. jul. 2017

Invited talk: Novel Applications of XPS-Inelastic Background Analysis: 3D imaging and HAXPES
Sven Mosbæk Tougaard (Underviser)
17. okt. 2017

Invited Tutorial at workshop "Optimizing Information Content of X-ray Photoelectron Spectroscopy Analys" at University of Oregon, USA: "QUASES software applied to XPS-Nanostructure Characterization"
Sven Mosbæk Tougaard (Foredragsholder)
28. apr. 2009

Invited talk: "Non-Destructive Characterization of Nano-Structures by XPS"
Sven Mosbæk Tougaard (Foredragsholder)
2013

IVC18- International Vacuum Congress
Sven Mosbæk Tougaard (Taler)
7. aug. 2010

J of Physics: Condensed Matter (Tidsskrift)
Sven Mosbæk Tougaard (Redaktør)
1. jan. 2008

J Phys D: Applied Physics (Tidsskrift)
Sven Mosbæk Tougaard (Redaktør)
1. jan. 2009

J. Electron Spectroscopy and Related Phenomena, Elsevier (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
6. maj 2015

J. of Physics: Condensed Matter: The validity of semi-classical approach in calculation of surface excitation parameter (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
23. jun. 2011

Sven Mosbæk Tougaard (Redaktør)
1. jan. 2009
Julius-Maximilian University of Würzburg
Sven Mosbæk Tougaard (Gæsteforsker)

Keynote Speaker: Novel applications of inelastic background analysis: 3D Imaging and HAXPES
Sven Mosbæk Tougaard (Foredragsholder)
17. okt. 2016

Leader of research program supported by BCR, EU (Ekstern organisation)
Sven Mosbæk Tougaard (Medlem)
1. jan. 1989 → 31. dec. 1994

Leader of the international research program: "Tests of Algorithms for Data Processing in XPS under Versailles Project on Advanced Materials and Standards (VAMAS)" (Ekstern organisation)
Sven Mosbæk Tougaard (Medlem)
1. jan. 1997 → 1. feb. 2007

Materials Analysis Station, National Institute for Materials Science
Sven Mosbæk Tougaard (Gæsteforsker)
10. okt. 2010 → 13. okt. 2010

Materials Science Center
Sven Mosbæk Tougaard (Gæsteforsker)
20. okt. 2007 → 27. okt. 2007

Member of Center of Excellence: "Surface Phenomena and Reactions" (Ekstern organisation)
Sven Mosbæk Tougaard (Medlem)
1. feb. 2003 → 1. feb. 2007

Member of International Program Advisory Board for "International Symposium on Surface Science -Focusing on Nano-, Green, and Biotechnologies- (ISSS-6)"
Sven Mosbæk Tougaard (Arrangør)
28. jan. 2010 → 15. dec. 2011

Member of Program Committee for "5th International Symposium on Practical Surface Analysis (PSA-10)"
Sven Mosbæk Tougaard (Arrangør)
1. nov. 2009 → 10. okt. 2010

Member of Program Committee for 5th International Symposium on Practical Surface Analysis
Sven Mosbæk Tougaard (Arrangør)
21. okt. 2010 → …

Member of Program Committee for European Conference for Surface and Interface Analysis
Sven Mosbæk Tougaard (Arrangør)
4. sep. 2011

Member of steering committee for "European conference for applications of surface and interface analysis-ECASIA 09"
Sven Mosbæk Tougaard (Arrangør)

Member of the International Steering Committee for the conference: "European Conference on Applications of Surface and Interface Analysis (ECASIA-07)"
Sven Mosbæk Tougaard (Arrangør)
Member of the Program Committee for "55th IUVSTA Workshop on Electron Transport Parameters Applied in Surface Analysis"
Sven Mosbæk Tougaard (Arranger)

Member of the Program Committee for "International Symposium on Practical Surface Analysis 2007", Japan
Sven Mosbæk Tougaard (Arranger)
25. nov. 2007 → 28. nov. 2007

Member of the Program Committee for "2nd International Workshop on Hard X-ray Photoelectron Spectroscopy" at SPring-8, Japan
Sven Mosbæk Tougaard (Arranger)

Member, since 2002 of the "International Steering Committee for European Conference on Applications of Surface and Interface Analysis (ECASIA)" (Ekstern organisation)
Sven Mosbæk Tougaard (Medlem)
20. apr. 2002 → …

Model to correct XPS and AES for core hole-, transport- and surface effects. Validity and practical applications
Sven Mosbæk Tougaard (Foredragsholder)
1. sep. 2014

Nano Technology (Tidsskrift)
Sven Mosbæk Tougaard (Redaktør)
1. jan. 2008

Nanostructures Characterized by Electron Spectroscopy.
Sven Mosbæk Tougaard (Foredragsholder)
15. jun. 2011

Nanotechnology (Tidsskrift)
Sven Mosbæk Tougaard (Redaktør)
1. jan. 2008

Nanotechnology (Tidsskrift)
Sven Mosbæk Tougaard (Redaktør)
1. jan. 2008

National University of Singapore (Ekstern organisation)
Sven Mosbæk Tougaard (Medlem)
1. jan. 2009 → 1. mar. 2009

Near real time data analysis and other approaches to enhancing information from XPS
Sven Mosbæk Tougaard (Foredragsholder)
21. okt. 2009

New technique for non-destructive 3D-imaging of nano-structures
Sven Mosbæk Tougaard (Foredragsholder)
27. okt. 2010

Non-destructive imaging of nanostructures by analysis of the photoelectron peak shape
Sven Mosbæk Tougaard (Foredragsholder)
30. aug. 2016
Pacific Northwest National Laboratory  
Sven Mosbæk Tougaard (Gæsteforsker)  
28. apr. 2009 → 2. maj 2009

Paris Diderot University  
Sven Mosbæk Tougaard (Gæsteforsker)  
18. maj 2008 → 25. maj 2008

Participated in "The Latest in XPS Technology" meeting at Risoe, Denmark  
Sven Mosbæk Tougaard (Deltager)  
7. jun. 2007 → 8. jun. 2007

Participated in the international research project: "Synchrotron Microanalysis: accurate and traceable elemental analysis on the microscopic level" (Ekstern organisation)  
Sven Mosbæk Tougaard (Medlem)  
1. jan. 2000 → 1. jul. 2005

Physical Review B Condensed Matter (Tidsskrift)  
Sven Mosbæk Tougaard (Redaktør)  
1. jan. 2009

Poster at "European Conference on Surface and Interface Analysis": "Characterization of Au nano-cluster formation on and diffusion in Polystyrene using XPS peak shape analysis"  
Sven Mosbæk Tougaard (Foredragsholder)  
10. sep. 2007

Poster at "European Conference on Surface and Interface Analysis": "Test of validity of the V-type trajectory assumption in REELS experiments"  
Sven Mosbæk Tougaard (Foredragsholder)  
13. sep. 2007

Poster at "European Conference on Surface and Interface Analysis": "Theoretical determination of the surface excitation parameter for Ti, Fe, Cu, Pd, Ag, and Au"  
Sven Mosbæk Tougaard (Foredragsholder)  
12. sep. 2007

Quantitative Analysis of Surfaces by Electron Spectroscopy  
Sven Mosbæk Tougaard (Foredragsholder)  
24. mar. 2015

Quantitative Analysis of Surfaces by Electron Spectroscopy, XPS and AES  
Sven Mosbæk Tougaard (Keynote speaker)  

Quantitative XPS of nano-structures with the Quases software-Practical applications and tutorial examples  
Sven Mosbæk Tougaard (Foredragsholder)  

Quantitative XPS: Effects of core-hole and surface excitations  
Sven Mosbæk Tougaard (Foredragsholder)  
7. okt. 2010 → ...

QUASES workshop  
Sven Mosbæk Tougaard (Underviser)
QUASES-workshop
Sven Mosbæk Tougaard (Arrangør)
27. sep. 2015

REM8-8th International Meeting on recent developments in the study of radiation effects in matter
Sven Mosbæk Tougaard (Deltager)
20. sep. 2015 → 23. sep. 2015

Scientific leader of the international research program:”Determination of Standardized Parameters Describing the Electron Transport for Quantitative Surface Analysis by Electron Spectroscopies” (Ekstern organisation)
Sven Mosbæk Tougaard (Medlem)
1. jan. 1998 → 1. jan. 2002

Software Package to Calculate the Effects of Core hole and Surface Excitations on XPS and AES
Sven Mosbæk Tougaard (Foredragsholder)
6. sep. 2011

Spring-8, Japan: "Non-destructive characterization of nano-structures by analysis of the peak shape in photoelectron spectra "
Sven Mosbæk Tougaard (Foredragsholder)
21. jan. 2013

Surface Analysis 2009; 31st AVS-Symposium on Applied Surface Analysis
Sven Mosbæk Tougaard (Deltager)

Surface Analysis Course at Univ. of Surrey, UK
Sven Mosbæk Tougaard (Taler)
2013

Surface and Interface Analysis (Tidsskrift)
Sven Mosbæk Tougaard (Redaktør)
1. jan. 1987 → …
Surface Interface Analysis, Wiley (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
14. aug. 2015

Surface Interface Analysis, Wiley (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
19. sep. 2015 → ...

Surface Interface Analysis, Wiley (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
30. okt. 2015

Surface Interface Analysis, Wiley (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
okt. 2018

Surface Interface Analysis: "An accurate ..." (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
2011

Surface Interface Analysis: "Assessment of the thickness of SiO2 layers through XPS measurements employing experimental and theoretical values of β" (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
27. feb. 2012

Surface Interface Analysis: "Improved ARXPS.." (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
2011

Surface Interface Analysis: "Systematic Calculation of the Surface Excitation Parameters for 25 Materials" (Tidsskrift)
Sven Mosbæk Tougaard (Peer reviewer)
2012 → ...

Surface Science (Tidsskrift)
Sven Mosbæk Tougaard (Redaktør)
1. jan. 2008

Surface Science (Tidsskrift)
Sven Mosbæk Tougaard (Redaktør)
1. jan. 2008

Surface Science (Tidsskrift)
Sven Mosbæk Tougaard (Redaktør)
1. jan. 2008

Surface Science (Tidsskrift)
Sven Mosbæk Tougaard (Redaktør)
1. jan. 2008

Surface Science (Tidsskrift)
Sven Mosbæk Tougaard (Redaktør)
1. jan. 2008
Talk at "12th Joint Vacuum Conference (JVC-12)" in Hungary: "3-Dimensional XPS Imaging of Surface Nano-structures; A New Technique"
Sven Mosbæk Tougaard (Foredragsholder)
23. sep. 2008

Talk at "European Conference on Surface and Interface Analysis": Applicability of REELS to characterize the electronic properties of surface nano-structures*
Sven Mosbæk Tougaard (Foredragsholder)
10. sep. 2007

Talk at "Mads Clausen Institut", Sønderborg Denmark: "Characterization of Morphology and Electronic Properties of Surface Nano-structures with XPS and REELS"
Sven Mosbæk Tougaard (Foredragsholder)
26. feb. 2009

Talk at "Surface Analysis 2009; 31st AVS-Symposium on Applied Surface Analysis", California USA: "3-Dimensional XPS Imaging of Surface Nano-structures; A New Technique"
Sven Mosbæk Tougaard (Foredragsholder)
22. apr. 2009

Talk at Charles University in Prague: "Characterization of nano-structured materials with XPS-peak shape analysis"
Sven Mosbæk Tougaard (Foredragsholder)
11. nov. 2009

Talk at Helsinki University of Technology: "Characterization of chemical composition and electronic properties of nano-structures*
Sven Mosbæk Tougaard (Foredragsholder)
13. aug. 2007

Talk at Materials Science Center, Sevilla: "XPS Imaging of Nano-structures"
Sven Mosbæk Tougaard (Foredragsholder)
16. mar. 2010

Talk at Tampere University of Technology 2007: "Algorithm for Automatic XPS data analysis and applications to 3D XPS imaging"
Sven Mosbæk Tougaard (Foredragsholder)
10. aug. 2007

Talk at Universitaet Wuerzburg: "Nano-scale in-depth composition and electronic properties of nano-structured thin films determined with XPS and REELS"
Sven Mosbæk Tougaard (Foredragsholder)
23. jun. 2009

Talk at "55th IUVSTA Workshop: Electron Transport Parameters; Applications in Surface Analysis": "Validity of Yubero-Tougaard theory to quantitatively determine the dielectric properties of surface nanofilms"
Sven Mosbæk Tougaard (Foredragsholder)
16. sep. 2008

Talk at "Pacific Northwest National Laboratory", Washington-State, USA: "3-Dimensional Nano-Structure Information from X-Ray Photo Electron Spectroscopy"
Sven Mosbæk Tougaard (Foredragsholder)
30. apr. 2009

Talk at 2nd IEEE International Nanoelectronics Conference in Shaghai, China: "3-Dimensional XPS Imaging of Surface Nano-structures; A New Technique"
Sven Mosbæk Tougaard (Foredragsholder)
Talk at "European Conference on Surface and Interface Analysis": "Tomography on the nanoscale by XPS; A new approach to visual 3D-imaging"
Sven Mosbæk Tougaard (Foredragsholder)
11. sep. 2007

The Centre of Physical Experiments
Sven Mosbæk Tougaard (Gæsteforsker)
18. aug. 2010 → 22. aug. 2010

The Dielectric Function and its application in nano-structure characterization
Sven Mosbæk Tougaard (Foredragsholder)
3. apr. 2014

Ukendt (Ekstern organisation)
Sven Mosbæk Tougaard (Deltager)
19. okt. 2015 → 22. okt. 2015

University of Indonesia
Sven Mosbæk Tougaard (Gæsteforsker)

Visited "Applied Materials" - leader in Nanomanufacturing Technology solutions; Santa Clara, California, USA
Sven Mosbæk Tougaard (Vejleder)
20. apr. 2009

Visited "KLA-Tencor" - leading semiconductor equipment manufacturer; Santa Clara, California, USA
Sven Mosbæk Tougaard (Rådgiver)
21. apr. 2009

Workshop on XPS-QUASES analysis
Sven Mosbæk Tougaard (Underviser)
28. sep. 2017

Writing Scientific Papers
Sven Mosbæk Tougaard (Foredragsholder)
1. apr. 2014