

ISSUE 44 (JULY-SEPT 2015)

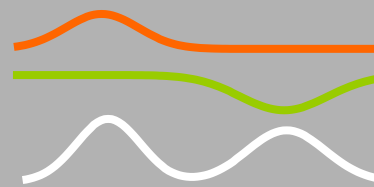
PROFESSOR SØREN BALLING ENGELSEN RECEIVES THE PRESTIGIOUS TOMAS HIRSCHFELD AWARD 2015.

The award is given for “Outstanding achievements in Near-Infrared Spectroscopy” and will be presented at the 17TH ICNIRS conference in Foz do Iguaçu (Brazil) in October 2015.

The award is made in honor of Tomas Hirschfeld who died at a young age in 1986. Before then he had already co-invented FT-Raman spectroscopy, authored more than 200 patents and written two Science publications (one about “Chemical sensing in process analysis” with professor Kowalski). The Tomas Hirschfeld award is issued by the International Council of Near Infrared Spectroscopy and sponsored by FOSS.

<http://www.icnirs.org/index.php/tomas-hirschfeld-award/awardees>





Peer reviewed publications July-September 2015:

R Calvini, A Ulrici, JM Amigo. Practical comparison of sparse methods for classification of Arabica and Robusta coffee species using near infrared hyperspectral imaging.

Chemometrics and Intelligent Laboratory Systems. 146, 503–511, 2015.

M Münchow, L Jørgensen, JM Amigo, K Sørensen, R Ipsen. Steam-frothing of milk for coffee: Evaluation for foam properties using video analysis and feature extraction.

International Dairy Journal. 51, 84-91, 2015.

M Khorasani, JM Amigo, P Bertelsen, F van den berg, J Rantanen. Detecting blending end-point using mean squares successive difference test and near-infrared spectroscopy. *Journal of Pharmaceutical Sciences.* 104, 2541–2549, 2015.

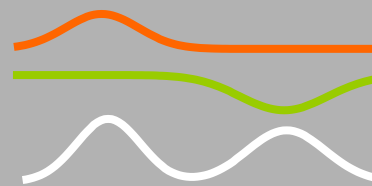
G Ares, L Antúnez, D Oliveira, F Alcaire, A Giménez, I Berget, T Næs, P Varela. Pole selection in Polarized Sensory Positioning: Insights from the cognitive aspects behind the task. *Food Quality and Preference.* 46, 48–57, 2015.

J Bandier, BC Carlsen, MA Rasmussen, LJ Petersen, JD Johansen. Skin reaction and regeneration after single sodium lauryl sulfate exposure stratified by filaggrin genotype and atopic dermatitis phenotype. *British Journal of Dermatology.* 172, 1519–1529, 2015.

R Bro, MH Kamstrup-Nielsen, SB Engelsen, F Savorani, MA Rasmussen, L Hansen, A Olsen, A Tjønneland, LO Dragsted. Forecasting individual breast cancer risk using plasma metabolomics and biocontours. *Metabolomics.* 11, 1376–1380, 2015.

GW Haxholm, LF Nikolajsen, JG Olsen, J Fredsted, FH Larsen, V Goffin, SF Pedersen, AJ Brooks, MJ Waters, BB Kragelund. Intrinsically disordered cytoplasmic domains of two cytokine receptors mediate conserved interactions with membranes. *Biochemical Journal.* 468, 495–506, 2015.

J Holm, SW Bruun, SI Hansen. The complex interplay between ligand binding and conformational structure of the folate binding protein (folate receptor): Biological perspectives. *Biochimica et Biophysica Acta.* 1854, 1249–1259, 2015.



Peer reviewed publications July-September 2015:

KT Jensen, FH Larsen, C Cornett, K Löbmann, H Grohganz, T Rades. Formation mechanism of coamorphous drug–amino acid mixtures. *Molecular Pharmaceutics*. 12, 2484–2492, 2015.

R Miklos, L Cheong, X Xu, R Lametsch, FH Larsen. Water and fat mobility in myofibrillar protein gels explored by low-field NMR. *Food Biophysics*. 10, 316–323, 2015.

JK Jensen, JM Amigo, SB Engelsen, F van den Berg. Protein residual fouling identification on UF membranes using ATR-FT-IR and multivariate curve resolution. *Chemometrics and Intelligent Laboratory Systems*. 144, 39–47, 2015.

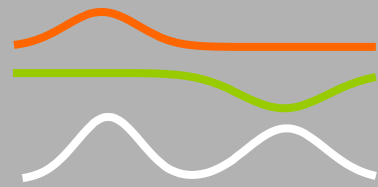
D Szunyogh, B Gyurcsik, FH Larsen, M Stachura, PW Thulstrup, L Hemmingsen, A Jancsó. ZnII and HgII binding to a designed peptide that accommodates different coordination geometries. *Dalton Transactions - The Royal Society of Chemistry*. 44, 12576–12588, 2015.

E Maslova, D Rytter, BH Bech, TB Henriksen, MA Rasmussen, SF Olsen, TI Halldorsson. Maternal protein intake during pregnancy and offspring overweight 20 years later. *The American Journal of Clinical Nutrition*. 1139-1148, 2015.

E Maslova, D Rytter, BH Bech, TB Henriksen, MA Rasmussen, SF Olsen, TI Halldorsson. Maternal animal protein intake during pregnancy and risk of overweight in offspring 20 years later: a prospective cohort study. *The Lancet*. 382, 71, 2015.

HM Jensen, FH Larsen, SB Engelsen. Characterization of Alginates by Nuclear Magnetic Resonance (NMR) and Vibrational Spectroscopy (IR, NIR, Raman) in Combination with Chemometrics. In: *Methods in Molecular Biology*. 1308, 347-363, 2015.

E Acar, R Bro, AK Smilde. Data fusion in metabolomics using coupled matrix and tensor factorizations. *Proceedings of the IEEE*. 103 (9), 1602-1620, 2015.



Other publications incl. media July-September 2015:

Å Rinnan, AJ Lawaetz. Forskere fremavler gulerødder sprængfyldt med farvestoffer.
Ingeniøren.dk. July 16th, 2015.

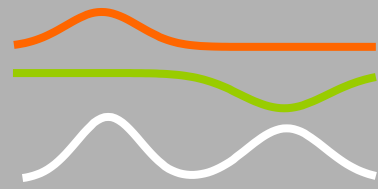
SB Engelsen. Søren Balling Engelsen, professor i biospektroskopi, Institut for Fødevarevidenskab, Københavns Universitet, har vundet prisen Tomas Hirschfeld Award 2015. *Jyllandsposten.* September 3rd, 2015.

SB Engelsen. Professor Søren Balling Engelsen er vinder af "Tomas Hirschfeld Award 2015". *Kristeligt Dagblad.* September 8th, 2015.

SB Engelsen. Professor Søren Balling Engelsen er vinder af "Tomas Hirschfeld Award 2015". *Thisted Dagblad.* September 12th, 2015.



Spectroscopy & Chemometrics



Staff:

- Iuliana Madalina Stoica, PhD student 1/8-2015 – 31/7-2018 (Fvd Berg)
- Marie Rosenberg Bak, MSc student 31/8-2015 – 29/3-2016 (T Skov)
- Nunzia Laccarino, DD PhD student 1/9-2015 – 31/8-2016 (F Savorani)
- Jakob Dan-Nielsen, MSc student 1/9-2015 – 31/5-2016 (FH Larsen)
- Kasper Rosenkvist, MSc student 1/9-2015 – 29/2-2016 (Å Rinnan)
- Francesca Zorzet, MSc Student 1/9-2015 – 31/3-2016 (Å Rinnan)
- Laura Mikkelsen, assistant teacher 1/9 – 1/12-2015 (MA Andersen)
- Julie Ohrt Jensen, assistant teacher 1/9 – 1/12-2015 (MA Andersen)

Guest Researchers:

- Daniel Caballero, student 1/7 – 31/8-2015 (host JM Amigo)
- Rubén Barrilero Regadera, student 1/9 – 30/11-2015 (host R Bro)
- Saioa E Martín, student 1/9 – 31/12-2015 (host JM Amigo)
- Jessica Perez, MSc student 1/9 – 31/11-2015 (host JM Amigo)
- Alex Lattanzi, student 7/9 – 24/12-2015 (host R Bro)

PhD defenses:

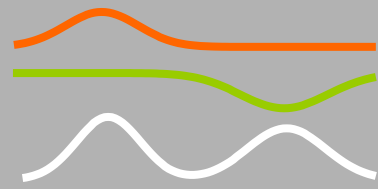
- Parvaneh Ebrahimi (supervisor SB Engelsen): Metabolic profiling of food protective cultures by in vitro NMR spectroscopy. September 18th, 2015

BSc & MSc defenses:

- Cathryn Bordenave, MSc (supervisor R Bro): Development of a PAT tool for monitoring an intermediate in the continuous manufacturing of melitracen. August 13th 2015
- Sarah Kofod Nielsen, MSc (supervisor FH Larsen): From coffee cherry to final brew- the effects of processing on coffee aroma and taste by analysis. August 18th 2015
- Ingelise Møller Bjørnholt-Schou, MSc (supervisor N Viereck, co-supervisor KM Sørensen): Investigation and use of local regression methods in high-performance multivariate calibration models based on large NIR databases. September 10th 2015



Spectroscopy & Chemometrics



Courses July-September:

Block 1 (Sept-Nov):

- BSc Summer Course: Food Entrepreneurship: Designing new business opportunities in the Food sector (N Viereck, 30 Students)
- BSc: Food production, society and health (SB Engelsen, 117 students)
- BSc: Fødevaredataanalyse I (MA Rasmussen, 84 students)
- BSc: Food quality management & control (T Skov, 66 students)
- MSc: Exploratory data analysis/Chemometrics (Å Rinnan, 60 students)
- MSc: Design of experiments and optimization (Fvd Berg, 23 students)
- MSc: Lecture in: Advanced NMR (FH Larsen, 10 students)
- MSc: Lecture in: Fundamentals of beer brewing and winemaking (FH Larsen, 22 students)
- MSc: Lecture in: Advanced carbohydrate technologies (FH Larsen, 15 students)
- MSc: Lecture in: Food colloids (FH Larsen, 15 students)
- MSc: Lecture in: Food innovation & health (T Skov, 25 students)
- PhD: Multi-way analysis (R Bro, 18 students)
- ODIN: Infrared and Raman spectroscopy 23/9-2015 (Fvd Berg, SB Engelsen, 7 students)

New granted projects:

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