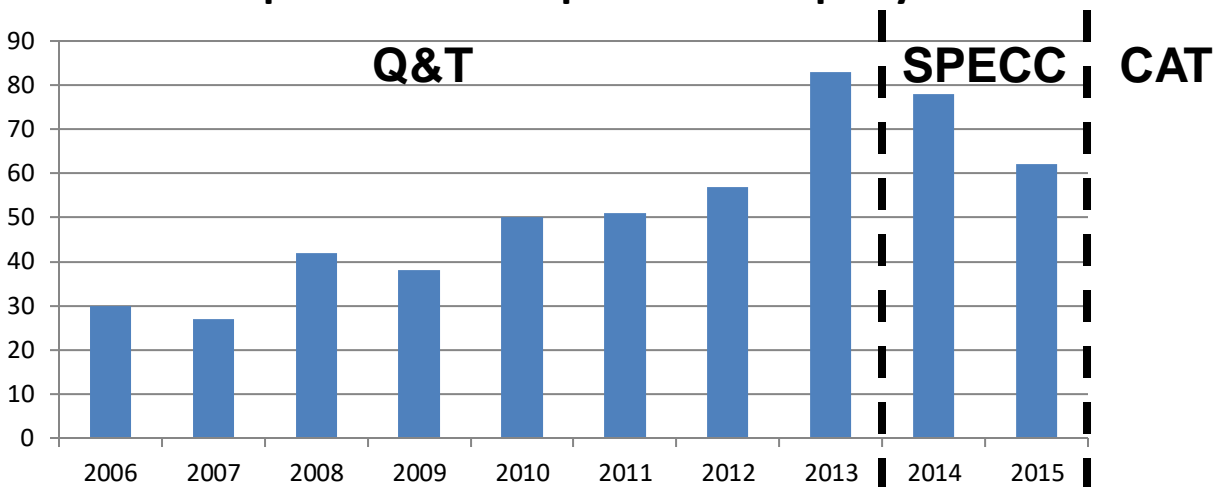


ISSUE 46 (JANUARY-MARCH 2016)

## NUMBER OF SPECC PUBLICATIONS CONTINUE TO DECREASE

After the publication record in 2013 with more than 80 SPECC publications, the number of SPECC publications have been declining in 2014 and 2015. The most obvious reason for the decrease is the reduced number of researchers after the split with the new DMP section (July 2013 - mentioned in issue 36) and a much larger teaching portfolio.

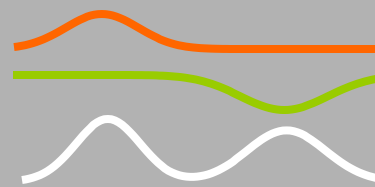
SPECC peer reviewed publications per year



## NEW NAME OF SECTION:

After less than three years with **SPECTroscopy & Chemometrics** (SPECC) as our section name, a major reorganization of the department has made us change the name again. Per April 1<sup>st</sup> 2016 our section will change name to: **Chemometrics and Analytical Technology** or in short

# CAT



## Peer reviewed publications Jan-Mar 2016:

**H Babamoradi, F van den Berg, Å Rinnan.** Confidence limits for contribution plots in multivariate statistical process control using bootstrap estimates. *Analytica Chimica Acta*. 908, 75-84, 2016.

**AH Honoré, SD Aunsbjerg, P Ebrahimi, M Thorsen, C Benfeldt, S Knøchel, T Skov.** Metabolic footprinting for investigation of antifungal properties of *Lactobacillus paracasei*. *Analytical and Bioanalytical Chemistry*. 408, 83–96, 2016.

**N Ratola, S Ramos, V Homem, JA Silva, P Jiménez-Guerrero, JM Amigo, L Santos, A Alves.** Using air, soil and vegetation to assess the environmental behaviour of siloxanes. *Environmental Science and Pollution Research*. 23, 3273–3284, 2016.

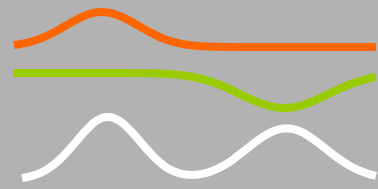
**S Elcoroaristizabal, RM Callejón, JM Amigo, JA Ocaña-González, ML Morales, C Ubeda.** Fluorescence excitation–emission matrix spectroscopy as a tool for determining quality of sparkling wines. *Food Chemistry*. 206, 284–290, 2016.

**L Zhang, DM Folkenberg, JM Amigo, R Ipsen.** Effect of exopolysaccharide-producing starter cultures and post-fermentation mechanical treatment on textural properties and microstructure of low fat yoghurt. *International Dairy Journal*. 53, 10-19, 2016.

**JX Wu, JM Amigo.** Moving to fast chemical imaging techniques in process control. *European Pharmaceutical Review*. 21 (1), 48-51, 2016.

**I Czolkos, E Dock, E Tønning, J Christensen, M Winther-Nielsen, C Carlsson, R Mojžíková, P Skládal, U Wollenberger, L Nørgaard, T Ruzgas, J Emnéus.** Prediction of waste water quality using amperometric bioelectronic tongues. *Biosensors and Bioelectronics*. 75, 375–382, 2016.

**LPD Ribeiro, APM da Silva, AA de Lima, E de Oliveira Silva, Å Rinnan, C Pasquinid.** Non-destructive determination of quality traits of cashew apples (*Anacardium occidentale*, L.) using a portable near infrared spectrophotometer. *Journal of Near Infrared Spectroscopy*. 24, 77–82, 2016.



## Peer reviewed publications Jan-Mar 2016:

**BL Chawes, K Bønnelykke, J Stokholm, NH Vissing, E Bjarnadóttir, AM Schoos, HM Wolsk, TM Pedersen, RK Vinding, S Thorsteinsdóttir, L Arianto, HW Hallas, L Heickendorff, S Brix, MA Rasmussen, H Bisgaard.** Effect of Vitamin D3 Supplementation During Pregnancy on Risk of Persistent Wheeze in the Offspring A Randomized Clinical Trial. *The Journal of the American Medical Association*. 315 (4), 353-361, 2016.

**SL Jensen, MB Diemera, M Lundmark, FH Larsen, A Blennow, HK Mogensen, TH Nielsen.** Levanase from *Bacillus subtilis* hydrolyses -2,6 fructosyl bonds in bacterial levans and in grass fructans. *International Journal of Biological Macromolecules*. 85, 514-521, 2016.

**X Fu, K Huang, WK Ma, ND Sidiropoulos, R Bro.** Joint Tensor Factorization and Outlying Slab Suppression With Applications. *IEEE Transactions on Signal Processing*. 63 (23), 2016.

**DT Berhe, CE Eskildsen, R Lametsch, MS Hviid, F van den Berg, SB Engelsen.** Prediction of total fatty acid parameters and individual fatty acids in pork backfat using Raman spectroscopy and chemometrics: Understanding the cage of covariance between highly correlated fat parameters. *Meat Science*. 111, 18-26, 2016.

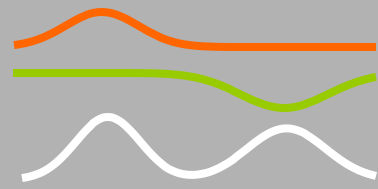
**S Pentzold, M Zagrobelny, B Khakimov, SB Engelsen, H Clausen, BL Petersen, J Borch, BL Møller, S Bak.** Lepidopteran defence droplets – a composite physical and chemical weapon against potential predators. *Scientific Reports*. 6, 1-11, 2016.

**A Grossi, K Olsen, T Bolumar, Å Rinnan, LH Øgendal, V Orlien.** The effect of high pressure on the functional properties of pork myofibrillar proteins. *Food Chemistry*. 196, 1005-1015, 2016.

**MS Andersen, J Frydenvang, P Henckel, Å Rinnan.** The potential of laser-induced breakdown spectroscopy for industrial at-line monitoring of calcium content in comminuted poultry meat. *Food Control*. 64, 226-233, 2016.



# Spectroscopy & Chemometrics



## Peer reviewed publications Jan-Mar 2016:

**A Trubetskaya, PA Jensen, AD Jensen, M Steibel, H Spliethoff, P Glarborg, FH Larsen.** Comparison of high temperature chars of wheat straw and rice husk with respect to chemistry, morphology and reactivity. *Biomass and Bioenergy*. 86, 76-87, 2016.

**M Kramshøj, I Vedel-Petersen, M Schollert, Å Rinnan, J Nymand, H Ro-Poulsen, R Rinnan.** Large increases in Arctic biogenic volatile emissions are a direct effect of warming. *Nature Geoscience*. 9, 349–352, 2016.

**AJ Lawaetz, SMU Christensen, SK Clausen, B Jørnsgaard, SK Rasmussen, SB Andersen, Å Rinnan.** Fast, cross cultivar determination of total carotenoids in intact carrot tissue by Raman spectroscopy and Partial Least Squares calibration. *Food Chemistry*. 204, 7–13, 2016.

## Other publications incl. media Jan-Mar 2016:

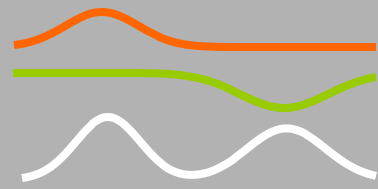
**Å Rinnan, SB Engelsen.** The shining future of near infrared spectroscopy in plant phenomics, crop sorting and biofuel production. *NIR News*. 27 (1), 2016.

**M Kramshøj, I Vedel-Petersen, M Schollert, Å Rinnan, J Nymand, H Ro-Poulsen, R Rinnan.** Large increases in Arctic biogenic volatile emissions are a direct effect of warming. [www.nature.com/naturegeoscience](http://www.nature.com/naturegeoscience). 1-5, 2016.

**FH Larsen.** NMR-spektroskopi afslører fupfødevarer. Interview: *Ingeniøren*. <http://ing.dk/artikel/nmr-spektroskopi-afslorer-fupfodevarer-182483>. 27. februar, 2016.



# Spectroscopy & Chemometrics



## Staff:

- Dennis Ej Efternavn, MSc student, 1/1-31/7 - 2016 (F van den Berg)
- Helena da Silva Friis, MSc student, 1/1-20/3 - 2016 (R Bro)
- Ecem Evrim Çelik, DD PhD, 21/3 - 2015 – 10/6 - 2016 (JM Amigo)

## Guest Researchers:

- Nabiollah Allah Mobaraki, Guest PhD student, 1/1-30/6 - 2016 (R Bro)
- Teresa Rita Pitorra Marta, Guest MSc student, 20/1-31/5 - 2016 (F van den Berg)
- Mancini Manuela, PhD guest student, 31/3-31/5 - 2016 (Å Rinnan)
- Fabrizio Biganzoli, Guest MSc student, 1/3-30/6 - 2016 (R Bro)
- Mario Li Vigni, Guest Post doc, 1/3-31/3 - 2016 (JM Amigo)

## PhD defenses:

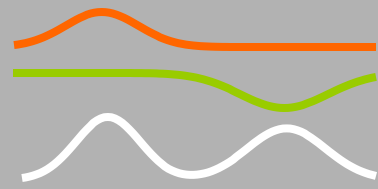
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## BSc & MSc defenses:

- Johanne Plesner, BSc (supervisor FH Larsen): Comparison of enzymatic degradation of different proteins. January 29<sup>th</sup> 2016.
- Karen H.G. Nielsen, MSc (supervisor Å Rinnan): Fluorescence spectroscopy and chemometrics as rapid method for quality differentiation of poultry meat. January 29<sup>th</sup> 2016.
- Nicoline Brinck Mulvad, MSc (supervisor T Skov): Sampling procedures and problems hereoff in the food industry. February 12<sup>th</sup> 2016.
- Francesca Zorzet, MSc (supervisor Å Rinnan): Development of non-destructive anthocyanin measurement methods for carrot tissue. March 11<sup>th</sup> 2016.



# Spectroscopy & Chemometrics



## **Courses January-March:**

### **Block 3:**

- BSc: Quality of Raw Food Materials (DMP, LT Dahl, A Mourhib, 117 students)
- MSc: Food Process Equipment (F van den Berg, 57 students)
- ODIN: Basic Chemometrics (2-3/3 2016, 5 students, CE Eskildsen, R Bro)
- ODIN: Processing of untargeted GC-MS data (13/4 2016, LG Johnsen (MS-Omics))

### **New granted projects:**

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