100th Anniversary of the Regaining Independence by Poland



38th International Symposium on Halogenated Persistent Organic Pollutants

DioXin 2018

& 10th International PCB Workshop 26 – 31 August 2018, Kraków, Poland

Abstracts selected for Verbal or Poster presentation and some other information related to Dx18





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Day	Seminar by	Hall
Sunday, 26 August		
Users' meeting	ThermoFisher	Chamber 1
Users' meeting	Waters	Chamber 2
Monday, 27 August		·
Lunch time seminar	Waters	Chamber 2
Lunch time seminar	Agilent Technologies	Conf. Hall 1
Lunch time seminar	FMS	Conf. Hall 3
Tuesday, 28 August		·
Lunch time seminar	ThermoFisher	Chamber 1
Lunch time seminar	MIURA	Conf. Hall 1
Lunch time seminar	LCTech	Conf. Hall 3
Wednesday, 29 August		
Lunch time seminar	Agilent Technologies	Conf. Hall 2
Thursday, 30 August		
Lunch time seminar	ThermoFisher	Chamber 1

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BIODETECTION METHODS FOR POPs AND RELATED FOOD AND ENVIRONMENTAL CONTAMINANTS (S 1) SPECIAL SESSION

Verbal presentations

Pan G, Wei S: Identification of endocrine disruptors in source water using effect directed analysis and reduced zebrafish transcriptome

Schafberg M, Lau AE, Krauss UR, Brockmeyer B: *Towards a cost-effective and rapid toxicological screening method for organic contaminants in marine matrices using HPTLC-bioluminescence detection with Aliivibrio fischeri*

Behnisch PA, Besselink H, Alygizakis N, Slobodnik J, Brouwer A: *Effect-based screening of contaminants in effluents from waste water treatment plants in the Danube river basin*

Huang WX, Tsai PC, Ngo TH, Wu CP, Ueng YF, Chi KH: Assessing the cytotoxicity and genotoxicity of chemical components in fine particulate matters (PM2.5) from different areas in Taiwan

Meirong Z: Metabolites of chiral pesticides: a blind spot of risk assessment on pesticides

Francese DR, Varello K, Pezzolato M, Prearo M, Bona MC, Abete MC, Squadrone S, Masoero L, Elia AC, Gasco L, Meloni D, Bozzetta E: Evaluation of the toxic effects of livestock drinking water by translational studies in vivo and in vitro

Behnisch PA, Besselink H, Malonek L, Limone A, Pizzolante A, Pierri A, Ferro A, Gallo A, Buonerba C, Pierri B, Di Stasio A, Cerino P, Durward-Akhurst SA, Schultz NE, Norton EM, Rendahl AK, Geor RJ, Mickelson JR, McCue ME, Brouwer A: Blood plasma monitoring of contaminants in humans and domestic animals using a panel of CALUX® bioassays: three case studies

Schaechtele A, Kraetschmer K, Schill S, Malisch R: Evaluation of the EURL proficiency test results on the determination of dioxin-like compounds by bioanalytical screening methods

Poster presentations

Kasuya M, Minh Tue N, Goto A, Tanabe S, Kunisue T: *AhR agonists in Japanese wild birds evaluated by chemical analysis and bioassays*

Meloni D, Pitardi D, Cavarretta MC, Loprevite D, Freguglia F, Behnisch P, Bozzetta E: An effect-based approach for the screening of endocrine disruptors in plastic food contact materials: preliminary data

Meloni D, Pitardi D, Olivo F, Cavarretta MC, Loprevite D, Ingravalle F, Pezzolato M, Brouwer A, Behnisch P, Bozzetta E: Effect based detection of illicit use of synthetic glucocorticoids in meat producing calf

Sugihara K, Kawabata K, Sanoh S, Kitamura S, Ohta S: Photodegradation of PPCPs in the aquatic environment by sunlight and UV, and the expression of ecotoxicity

Vandermarken T, Boonen I, Gryspeirt C, Van Den Houwe K, Denison MS, Goeyens L, Van Hoeck E, Elskens M: Estrogenic activity in dry food simulants: chemical migration from paperboard packaging

EUROPEAN FOOD SAFETY AUTHORITY SESSION: EFSA RISK ASSESSMENTS OF PERSISTENT ORGANIC POLLUTANTS IN FOOD AND FEED (S 2) SPECIAL SESSION

Verbal presentations

Mackay K: EFSA's risk assessment on persistent organic pollutants
Schwerdtle T: PFOS/PFOA in food: Main conclusions of the EFSA risk assessment
Barregård L: PFOS/PFOA in food: Use of epidemiological data for the EFSA risk assessment
Haug L: PFOS/PFOA in food: Human biomonitoring
Schwerdtle T: EFSA's approach for PFASs other than PFOS/PFOA
Hoogenboom R: Dioxins in food and feed: Transfer and risks of PCDD/Fs and DL-PCBs in farm animals
Knutsen H: Dioxins in food and feed: Adverse effects of PCDD/Fs and DL-PCBs in humans and revising the TWI
Hoogenboom R: Dioxins in food and feed: Exposure assessment and human levels of PCDD/Fs and DL-PCBs

ENVIRONMENTAL PERSISTENCE, ANALYTICAL METHODS AND RISK OF HUMAN AND VETERINARY PHARMACEUTICALS AND PERSONAL CARE PRODUCTS THAT CAN ACT AS PSEUDO-POPs (S 3) SPECIAL SESSION

Verbal presentations

Apel C, Tang J, Joerss H, Ebinghaus R: Organic UV stabilizers in the coastal and marine environment of *Europe and China*

Hung H, Wong F, Shunthirasingham C, Alaee M, Bisbicos T, Pacepavicius G, Smyth SA, Teslic S, Broad K, Marvin C, Jia J, Brown M, Pajda A, Alexandrou N, Luk E, Jantunen L: *Wastewater treatment plants as a source of synthetic musks in the Great Lakes Region*

Jiang X, Huang J, Qu Y: Occurrence, removal and risk assessment of PPCPs in drinking water plants

Abdallah, MA, Nguyen KH, Ebele JA, Atia NN, Ali HR, Harrad S: *A single run, rapid polarity switching method for analysis of 30 pharmaceuticals and personal care products in waste water using Q-Exactive+ Orbitrap: application to Egyptian surface water*

Styszko K, Castrignanò E, Kasprzyk-Hordern B, Lechowicz W, Zuba D: Drug biomarkers in wastewater from Kraków agglomeration

Duan L, Zhang Y, Wang B, Yu G: Occurrence and spatiotemporal distribution of pharmaceutically active compounds (PhACs) at Beiyun River in Beijing, China: 2013-2017

Zhang Y, Duan L, Wang B, Yu G: Sewage epidemiology study of antibiotics in flu season in Beijing

Kumirska J: Selected analytical challenges and new approaches in the preparation of samples for the determination of pharmaceuticals in environmental matrices

Poster presentations

Debler F, Koetke D, Gandrass J: An automated SPE method for pharmaceuticals in coastal waters

Kademoglou K, Melymuk L, Klanova J: *Risk-based prioritisation of endocrine disrupting chemicals (EDCs)* present in personal care products

Nishino T, Kato M, Tojo T, Matsumura C, Hasegawa H, Miyawaki T: Risk assessment of pharmaceutical chemicals in the rivers in Tokyo, Japan

Praveenkumarreddy Y, Balakrishna K, Uegaki R, Akiba M, Guruge KS: Preliminary studies on temporal variations of antibiotics in sewage treatment plants in South India

Rauseo J, Barra Caracciolo A, Ademollo N, Cardoni M, Di Lenola M, Gaze WH, Stanton I, Grenni P, Pescatore T, Spataro F, Patrolecco L: Degradation of the sulfamethoxazole antibiotic in an agricultural soil

Rauseo J, Spataro F, Ademollo N, Pescatore T, Patrolecco L: *Pharmaceuticals and endocrine disrupting compounds (EDCs) in the Tiber River (Rome, Italy)*

Van Overmeire I, Vrijens K, Nawrot T, Van Nieuwenhuyse A, Van Loco J, Reyns T: Determination of endocrine disrupting compounds in human placenta by UPLC-ESI-MS/MS: a preliminary study on parabens, bisphenols and alkyl phenols

Zhao G, Zhou H: Occurrence of pharmaceuticals and personal care products in Baiyangdian Lake

LEGACY AND EMERGING FLUORINATED ORGANIC COMPOUNDS-UPDATE (S 4) SPECIAL SESSION

Verbal presentations: *Past and current pollution* 1

Thaker PN, Yamazaki E, Taniyasu S, Yamashita N, Makhija DD, Nirmal Kumar JI: Historical reconstruction of per- and polyfluoroalkyl substances pollution in Cooum river, India by the Great South India Floods in 2015

Wang SQ, Wang XH, Yamashita N, Yamazaki E: *Per- and polyfluoroalkyl compounds (PFCs) in gaseous and particulate phase from Xiamen, Chian*

Meng J, Wang TY, Zhou YQ, Li QF, Lu YL: *Downward trend of perfluorooctane sulfonate (PFOS) in China: based on dynamic life cycle analysis*

Qu Y, Huang J, Yu G, Jiang X, Li W, Liu L, Bao Y: Monitoring poly- and perfluoroalkyl substances (PFASs) in drinking water treatment plant and distribution system in Changzhou, China

Zhu L, Chen M, Chen W, Wang Q: *Partitioning and bioaccumulation of emerging and legacy per- and polyfluoroalkyl substances in Taihu Lake, China*

Wang TY, Zhou YQ, Meng J, Chen SQ: Occurrence, mass flux, and risk ranking of emerging pollutants in *municipal wastewater treatment plants*

Park H, Choo G, Kim H, Oh JE: Evaluation of the current contamination status of PFASs and OPFRs in South Korean tap water associated with its origin

Coggan TL, Kolobaric A, Walton F, Szabo D, Moodie D, Clark BO: Investigation of the levels of per- and polyfluoroalkyl substances (PFAS) and PFAS precursor compound (PreFAS) contribution in aqueous matrices from Australian WWTPs

Verbal presentations: Past and current pollution 2

Nguyen HT, Kaserzon SL, Vijayasarathy S, Braunig J, Thai PhK, Crosbie ND, Mueller JF: *Poly-*/perfluoroalkyl substances in two large wastewater treatment plants in Australia: Occurrence, temporal trend and mass load

Leonel J, Nascimento R, Zabaleta I, Bizkarguenaga E, Nunoo DBO, Schultes L, Prieto A, Zuloaga O, Benskin JP: *Sulfluramid as a source of PFOS in Brazil: what do we know?*

Fredriksson F, Yeung LWY, Kärrman A, Eriksson U: Comparison of per-/polyfluorinated substances profiles and levels in bird eggs from South Africa and Nordic countries

Aro R, Eriksson U, Kärrman A, Chen F, Wang T, Yeung LWY: *Per- and polyfluoroalkyl substance (PFAS) homologue profiles, including ultrashort-chain compounds, and extractable organofluorine (EOF) in wastewater treatment plant effluent and sludge from Nordic countries*

Bonnet BF, Barck-Holst E, Andersson H, Ahrens L: *Mass flow and fate of per- and polyfluoroalkyl substances in a landfill*

Joerss H, Apel C, Ebinghaus R: Occurrence and distribution of legacy and emerging per- and polyfluoroalkyl substances (PFASs) in surface waters and sediments of the German North and Baltic Seas

Verbal presentations: *Exposure and risk* 1

Eun H, Yamazaki E, Taniyasu S, Yamashita N: Assessment of perfluoroalkyl substances (PFASs) in open field vegetables

Yamazaki E, Taniyaus S, Noborio K, Falandysz J, Eun H, Yamashita N: Potential accumulation of per- and polyfluoroalkyl substances in rice (Oryza sativa subsp. Indica)

Kim H, Kim D-H, Lee J, Kim D-H, Oh J-E: *The field scale evaluation of uptake of PFASs from rice paddies to rice plant in South Korea*

Gebbink WA, Van Leeuwen, SPJ, Boon, PE, Mengelers, MJB: Contamination of local vegetable gardens with GEnX and PFOA near a fluorochemical production plant in the Netherlands

Verbal presentations: *Exposure and risk* 2

Toms L-ML, Braeunig J, Vijayasarathy S, Phillips S, Aylward L, Hobson P, Mueller JF: 15 years of biomonitoring: PFAS serum concentrations decline in an Australian population from 2002 to 2017

Fu JJ, Gao K, Liu X, Zhang AQ, Song MY, Jiang GB: Association between the placental transfer efficiencies and dissociation constant of serum-PFAS complexes

Korzeniowski SH, Cockshott K, Bowman J: Recent advances in toxicology, biodegradation, water remediation, assessment of alternatives, value-in-use and best practice guidance of short-chain fluorotelomer-based products for various well-known end-uses

Morris AJ, Mottaleb MA, Petriello M, Smyth SS, Mudd-Martin G, Moser DK: Circulating levels of perand polyfluoroalkyl substances in subjects undergoing behavioral/lifestyle based interventions for cardiovascular disease risk reduction

Numata J, Kowalczyk J, Schafft H, Lahrssen-Wiederholt L: Laying hens and biotransformation of PFAS precursors into PFAAs in eggs

Suzuki Y, Kitao R, Tanaka S, Yukioka S, Mizukami-Murata S, Ogawa F: Formation of PFOS and other metabolites from N-Ethyl perfluorooctane sulfonamidoethanol (N-EtFOSE) during an exposure experiment to Japanese medaka

Ericson Jogsten I, Styliano M, Majdak K, Ståhl P, Olsson P-E, Jass J: Microbial binding of perfluoroalkyl substances (PFASs)

Verbal presentations: Novel research approaches and future direction 1

Ohno K, Janssen M, Weber R: *Per- and polyfluoroalkyl substances (PFAS) and the Stockholm Convention on Persistent Organic Pollutants*

Sharkey M, Drage DS, Harrad S, Berresheim H: Persistent organic pollutants in Irish landfills: a nationwide assessment of BFRs and PFAS

Yamazaki E, Taniyasu S, Lam CWJ, Wang XH, Yamashita N: Per- and polyfluoroalkyl substances as chemical tracer for oceanography

Zhou YQ, Wang TY, Li QF, Wang P, Li L, Chen SQ, Zhang YQ, Khan K, Meng J: Spatial and vertical variations of perfluoroalkyl acids (PFAAs) in the Bohai and Yellow Seas: Bridging the gap between riverine sources and marine sinks

Yeung LWY, Aro R, Fredriksson F, Eriksson U, Chen F, Wang T, Kallenborn R, Kärrman A: Mass balance analysis of extractable organofluorine in environmental samples from the Nordic Countries

Simonnet-Laprade C, Budzinski H, Goutte A, Maciejewski K, Le Menach K, Alliot F, Santos R, Labadie P: Potential contribution of targeted and unidentified precursors to the apparent biomagnification of perfluoroalkyl acids (PFAAs) in the food web of an urban river

Björnsdotter MK, Yeung LWY, Kärrman A, Ericson Jogsten I: *Ultra-short-chain perfluoroalkyl substances* (*PFASs*) *including trifluoromethanesulfonic acid* (*TFMS*) *in environmental waters*

Verbal presentations: Novel research approaches and future direction 1

Makhija DD, Yamashita N, Yamazaki E, Taniyasu S, Thaker PN, Nirmal Kumar JI: Per- and polyfluoroalkyl substances (PFASs) pollution in human hair in India

Schultes L, Vestergren R, Volkova K, Westberg E, Jacobson T, Benskin JP: Known and unknown fluorinated compounds in cosmetic products: Fluorine mass balance calculations and human exposure scenarios

Meng P, Deng S: An alternative removal strategy for perfluorooctane sulfonate from aqueous film-forming foam solution by aeration-foam collection

Mullin L, Katz D, Riddell N, Plumb R, Burgess JA, Jogsten I: Reduction of LC/MS in-source fragmentation of HFPO-DA through mobile phase additive selection

Omo-Okoro PN, Daso AP, Okonkwo OJ: *Per- and polyfluoroalkyl substances (PFAS): Ubiquity, levels, toxicity and their removal from aqueous media using novel agro-based adsorbents*

Poster presentations

Fujii Y, Haraguchi K, Kato Y, Ohta C, Koga N, Kimura O, Endo T, Harada KH, Koizumi A: Edible fish is a source of human dietary exposure: perfluorinated alkyl acids in Pacific cods from North Pacific Ocean

Motegi M, Takemine S, Horii Y, Minomo K, Ohtsuka N, Nojiri K: Biennial survey of perfluoroalkyl and polyfluoroalkyl substances in river water from Saitama Prefecture, Japan during 2009-2017

Schramm TR, Joerss H, Ebinghaus R: Application of the total oxidizable precursor (TOP) assay to evaluate the amount of precursors to perfluoroalkyl acids (PFAAs) in German rivers

Wang S, Ding G, Chen C, Chen H, Li Y, Wang X: Levels and transportation of polyfluoroalkyl substances (PFASs) in the water and suspended particulate matter in the marine coastal environment of China, from the Yellow sea to the South China Sea

PROGRESS IN INDUSTRIAL TECHNOLOGY AND SUSTAINABLE CHEMISTRY TO PHASE OUT AND CONTROL POPs (S 5) SPECIAL SESSION

Verbal presentations

Jiang C, Zheng Z, Wang H, Tian Y, Sun Y, Huang J: To reduce and phase out PFOS in China: a technical roadmap under a GEF project

McDowall G, Bluteau T: *Eliminating the use of PFAS and Glycols used in the formulations of fire-fighting foams – An opportunity to embrace a sustainable outcome when fighting fires*

Franke V, Schäfers M, Lindberg JJ, Lakshmanan R, Ahrens L: Removal of per- and polyfluoroalkyl substances from drinking water using ozonation combined with a heterogeneous catalyst and persulfate

Omo-Okoro PN, Daso AP, Okonkwo OJ: *Per- and Polyfluoroalkyl substances (PFAS): Ubiquity, levels, toxicity and their removal from aqueous media using novel agro-based adsorbents*

Centeno C, Tyrkko K: UNIDO POPs program and Circular Economy: Addressing the challenge of persistent organic pollutants in the recycling chain

Slijkhuis Ch: Recycling plastics from WEEE requires a sensible and practical approach on POPs

Wagner S, Schlummer M, Mäurer A, Tange L, Noordegraaf J: *Recycling of EPS waste containing HBCDD* – *The PolyStyrene Loop*

Fantke P, Hauschild MZ, McKone TE: Risk and sustainability: trade-offs and synergies for robust decisions

STOCKHOLM CONVENTION, SOURCES, EXPOSURES, INVENTORIES AND ACTIONS TO REDUCE EXPOSURES (S 6) PCB WORKSHOP

Verbal presentations

Hornbuckle KC, Herkert NJ, Jahnke JC, Marek RF: Aroclor and non-Aroclor sources to air in schools and homes

Langeland M: Big data: National investigation of PCBs in indoor air in homes, offices, institutions, universities, laboratories, storage spaces and workshops

Ovesen SL, Andersen HV, Knudsen LE, Frederiksen M: Sampling PCB with silicone wristbands as a measure for personal exposure in contaminated buildings

Ewald JM, Martinez Araneda AJ, Mattes TE, Schnoor JL, Hornbuckle KC: *PCB dechlorination hotspots and reductive dehalogenase genes in a contaminated wastewater lagoon*

Haven RØ, Hauge Smith K, Dalvang L, Butera S, Thorman J: Thermal treatment technologies for polychlorinated biphenyls (PCB) in buildings and demolition waste

Kolarik B, Björkqvist S, Kampmann K: Remediation of PCB contaminated buildings - the impact of temperature changes on effectiveness of encapsulation

Van Hoeymissen J, Van den Acker W, Raedschelders S: PCB emissions from scrap metal recycling plants in Flanders, Belgium: an ongoing assessment

Jahnke JC, Hornbuckle KC: PCB Emissions from paint: Using the PUF-PES method to measure volatilization

Johansson N, Andersson L, Bogren T, Gullberg J, Krische R, Rångeby M: Sources to and transport of PCB via the Stream Väsbyån to Lake Oxundasjön in Upplands Väsby, Sweden

Bako CM, Ewald JM, Martinez Araneda AJ, Mattes TE, Schnoor JL, Hornbuckle KC: *Rhizoremediation of PCBs in sediment of a contaminated wastewater lagoon*

Martinez A, Awad AM, Herkert NJ, Hornbuckle KC: Determination of PCB fluxes from Indiana Harbor and Ship Canal using dual-deployed air and water passive samplers

EVOLVING APPROACHES TO ASSESSING EXPOSURES AND HEALTH RISKS FROM ENVIRONMENTAL CHEMICAL MIXTURES (S 7) PCB WORKSHOP

Verbal presentations

Lehmann G: Human health risk assessment of chemical mixtures, PCB case study

Carlson LM, Gift J, Davis A, Henning C, Hong T, Lehmann GM: Sufficient similarity evaluation of PCB mixtures: A case study using rodent carcinogenicity data

Haddad S: PBPK modeling to predict tissue levels of persistent organic pollutants following mixture exposures

Yesildagli BU, Karagoz C, Hunc F, Arslanbas D, Yucesoy G, Dillioglugil MO, Filiz S, Gunlemez A, Yılmaz Civan M: *PCB levels in maternal serum*

Palát J, Codling G, Schacht V, Klánová J: Polychlorinated biphenyls (PCBs) in human serum

Takeda R: Parental electro cardio graphies (after 50 Years) of Yusho victims who are left behind

Frederiksen M, Knudsen LE, Kolarik B, Haug LS, Broadwell SH Frøshaug M, Thomsen C, Egsmose, EL, Gunnarsen L, Ovesen SL1 Andersen HV: *PCB in blood, air, dust, wristbands, hand and surface wipes after PCB exposure in dwellings*

Pradeep P, Carlson LM, Judson R, Lehmann GM, Patlewicz G: Integrating data gap filling techniques for predicting neurotoxicity TEQs to facilitate the hazard assessment of polychlorinated biphenyls

Pěnčíková K, Svržková L, Strapáčová S, Neča J, Bartoňková I, Dvořák Z, Hýžďalová M, Pivnička J, Pálková L, Lehmler HJ, Li X, Vondráček J, Machala M: In vitro profiling of toxic effects of prominent environmental lower-chlorinated PCB congeners linked with endocrine disruption and tumor promotion

Rawn DFK, Sadler AR, Liao X, Feeley M: Polychlorinated biphenyl concentrations in Canadian salmon – revisiting the issue

Santos LL, Hatje V, Leonel J: Occurrence and distribution of PCBs in oyster from Todos os Santos Bay, Northeastern Brazil

NOVEL STUDIES ON PCB TOXICITY AND MECHANISMS ACTION (S 8) PCB WORKSHOP

Verbal presentations

Ludewig G, Flor S, Klenov V, Wang H, Adamcakova-Dodd A, Thorne P, Robertson L: *Rat PCB inhalation study: what can we learn about the effects of a school indoor air mixture?*

Esteban J, Barber X, Sánchez-Pérez I, Alarcón S, Wimmerová S, Palkovicova Murínová L, Conka K, Jurecková D, Trnovec T, van der Ven L, Viluksela M, Håkansson H: *Modulation of retinoid homeostasis by PCBs and related compounds*

Hennig B: Modulation of PCB-induced inflammatory diseases by lifestyle changes: Implications in atherosclerosis

Lein PJ, Sethi S, Keil KP, Yang D, Wayman GA: *The developmental neurotoxicity of legacy vs. contemporary PCBs: similarities and differences*

Duffel MW, Rodriguez EA, Tuttle K, Lehmler H-J, Robertson LW: Sulfation in the transport and toxicity of lower-chlorinated PCBs

Ghosh S, Mitra PS, Loffredo CA, Palkovicova Murinova L, Trnovec T, Sovcikova E, Jureckova D, Rausova K, Noreen Z, DeJesus J, Nnanabu T, Vilmenay K, Makambi KM, Nunlee-Bland G: Global gene-expression and pathway analysis of new born PCB-exposed Slovak children - perspectives on future disease and disorder development

Gadupudi GS, Klaren WD, Klingelhutz AJ, Robertson LW: PCB126 inhibits gluconeogenesis and fatty acid oxidation, necessary for energy sensing and homeostasis in rats

Saktrakulkla P, Wang K, Hornbuckle KC: A mathematical model for predicting the relative responses of unidentified OH-PCBs

Slavík J, Pěnčíková K, Svržková L, Šimečková P, Procházková J, Vondráček J, Machala M: Sphingolipid metabolism, autophagy and plasma membrane proteins are potential targets of non-dioxin-like PCB 153 in rat liver epithelial cells

Šimečková P, Pěnčíková K, Slavík J, Svržková L, Procházková J, Vondráček J, Machala M: PCB 153 induced changes in sphingolipid metabolism are potentially linked with alterations of intercellular communication in a model of non-tumorigenic rat liver epithelial cells

Xu Y: Microbial dechlorination of polychlorinated biphenyls (PCBs) in Taihu Lake sediment microcosms

REGULATORY ACTIONS - WHERE ARE WE GOING? FOLLOW UP ON RECENT ACTIONS +"NEW END-POINTS" + ONGOING NEW INITIATIVES (S 9) PCB WORKSHOP

Verbal presentations

Verstraete F: EU policy to prevent and reduce the presence of PCBs (DLs and NDLs) in food and feed

Ali I, Högberg J, Korhonen A, Stenius U: CRAB3: A text mining approach to evaluate PCB toxicity for health risk assessment

Erickson MD: Environmental PCB forensics: Processes and issues

Udugama GK, Werahera SM, Centeno CR: Challenges and recent developments in managing polychlorinated biphenyls (PCBs) in Sri Lanka

ABIOTIC ENVIRONMENTAL COMPARTMENTS (S 10)

Verbal presentations

Lunder Halvorsen H, Moeckel C, Pedersen LS, Krogseth IS, Bohlin-Nizzetto P, Schlabach M, Breivik K: Passive air sampling of POPs in background air along a European-Arctic transect

Takasuga T, Nakano T, Shibata Y: *Hexachlorobutadiene (HCBD) as predominant POPs in ambient air : all POPs levels and trends at frequent monitoring super-sites of Japan*

Mukai K, Fujimori T, Anh HQ, Fukutani S, Oshita K, Takaoka M, Takahashi S: Speciation of extractable organhalogens according to molecular size in various environmental matrices

Nakano T: Disaster and chemicals contamination

Folarin BT, Abdallah MA, Oluseyi T, Harrad S, Olayinka K: *Toxic equivalent concentrations of dioxin-like PCBs in soil samples from the vicinity of electrical power stations in Lagos, Nigeria*

Trinh M-H, Tsai Ch-L, Chang M-B: Characterization of polychlorinated polybromodiphenyl ethers (PBDEs) in various aqueous samples in Taiwan

Organtini K, Rosnack K, Cleland G: LC-MS/MS analysis of polyfluoroalkyl substances in surface, ground, and waste water samples

Urbaniak M, Kiedrzyńska E, Wyrwicka A, Zieliński M: Holistic approach to the problem of river contamination by selected POPs and possibilities for their removal using environment friendly technologies: the case of Pilica River (Central Poland)

Poster presentations

Bastiaensen M, Been F, Lai FY, van Nuijs A, Covaci A: Mining the chemical information of urban wastewater - Monitoring human exposure to phosphorous flame retardants and plasticizers (PFRs)

Čonka K, Drobná B, Stachová Sejáková Z, Gago F, Oravcová P, Fabišiková A, Dömötörová M, Kočan A: Dioxin pattern of environmental samples, feed and food in polluted sites in Slovakia

Han H-S, Kim Y-J, Song I-S, Bae Y-S, Lee Y-K, Kim D-G, Park I-B, Kim J-S: Concentrations of atmospheric PCDDs/PCDFs and PCBs in Gyeonggi and nearby area

Jia L, Deng Y, Mao W, Yin H, Tao F, Huang F: Levels of PCDD/Fs in soils in the vicinity of the municipal solid waste incinerator in Shanghai, China

Koshiba J, Hirai Y, Sakai S: Panel data analysis of environmental PCB in Japan: national and local concentration trends

Kwon SY, Seo S-H, Chang Y-S: *Fate and compositional profiles of perfluoroalkyl substances (PFASs) in multimedia environments*

Ruggeri MF, Poma G, Malarvannan G, Covaci A, Puliafito SE, Altamirano, JC: Preliminary assessment of OPEs levels in atmospheric samples from Mendoza City, Argentina

Nežiková B, Degrendele C, Čupr P, Hohenblum Phi, Moche W, Prokeš R, Vaňková L, Kukučka P Martiník J, Audy O, Přibylová P, Holoubek I, Weiss P, Klánová J, Lammel G: Bulk atmospheric deposition of persistent organic pollutants and PAHs in Central Europe

Styszko K, Skiba A, Samek L, Furman L, Zięba D, Kistler M, Kasper-Giebl A, Konduracka E: *Polycyclic aromatic hydrocarbons and endocrine disrupting chemicals in ambient particles from southern Poland, and their potential health impact*

ADVANCES IN ENVIRONMENTAL FORENSICS (S 11)

Verbal presentations

Capozzi SL, Jing R, Rodenburg LA, Kjellerup BV: Positive matrix factorization analysis shows dechlorination of polychlorinated biphenyls during domestic wastewater collection and treatment

Monti C, Mudge SM, Rose N, Negley T: Integrating a PCDD/F fingerprint study, using the 190 nontoxic congeners, with Hg isotopes: first results

Mudge SM, Monti C: PCB and PCDD/F source allocation around Taranto, Italy

Megson DM, Jones R, Johnson G, Brown T, Sandau C: *How many PCBs are there in my sample and where do they come from?*

Addink R, Shirkhan H, Germansderfer P, Hall T: Simple, quick, low cost high throughput sample clean up for dioxins, PCBs and PBDEs analysis

Miralles-Marco A, Schacht V, Codling G, Klánová J: *Applicability of a new UHPLC-HRMS/MS (Orbitrap)* method suitable for screening, quantification and confirmation of organic pollutants and residues in food composites

Riener J, Wong D, Walker D, Anumol T: *Dioxin analysis in water by isotope dilution using triple quadrupole GC/MS*

Stultz C, Dorman F L: Kovats and Lee retention indices for characterization of PCBs, PCNs, and Dioxins

Nikiforov VA: Structural variation, simple nomenclature, LC and MS-MS characterization of commercially available perfluoroethercarboxylic acids (PFECAs)

Mumtaz M, Bao YX, Li WC, Huang J: Application of total oxidizable precursor (TOP) assay for screening of per and polyfluoroalkyl substances (PFAS) from textile finishing agents available on Chinese market

Shirkhan H, Addink R, Hall T, Germansderfer P: Analysis of polychlorinated dibenzo-p-dioxins, furans and biphenyls in drinking water with semi-automated solid phase extraction

Ross I, Horneman A, Miles J, Hurst J, Houtz E: Detailed site investigation for per-and polyfluoroalkyl substances (PFASs) using advanced analytical tools

Poster presentations

Abercrombie V, Anumol T, Serrano-Izaguirre G, Provoost L, Lee J: Increased reproducibility in the analysis of EU and EPA PAH's with the Agilent Select PAH GC column and Metal Microfluidic Guard Chip Technology by gas chromatography

Gill R, Sarala R, Tarrant D, Takaku-Pugh S, Lytle E, Brown RF, Park J-S, Petreas M: Effective screening of furnishings for flame retardants

Kelterer K, Nickel M: Lean management and "One-Piece-Flow" for PCDD/F and PCB analysis to reduce the turn-around time in smaller laboratories compared to classical batch operation

Hall T, Addink R, Shirkhan H, Germansderfer P: Analysis of organochlorine pesticides and semi-volatiles in drinking water with semi-automated solid phase extraction

Wright M, Hope D, Pond P, Hope K, del Pozo J: Moving from ASTM 5790-95 to isotope dilution for OCPs by GC-MS/MS

AN ANALYTICAL UPDATE FOR DIOXINS AND RELATED HALOGENATED COMPOUNDS (S 12)

Verbal presentations

Shelepchikov AA, Turbabina KA, Ovcharenko VV, Brodsky ES, Kozhushkevich AI, Mir-Kadyrova EYa, Kalantaenko AM, Komarov AA, Nikulin VV: Solid phase extraction of PCDDs/PCDFs and dioxin-like PCBs from oils and fats

Sakatani K, Takahashi K, Takenaka S, Kajiwara J, Katsuki S, Mitoma C, Furue M: Ionic liquid extraction for the determination of polychlorinated dibenzo-p-dioxins, polychlorinated dibenzofurans, and dioxin-like polychlorinated biphenyls in soil and sediment

Savage DT, Hilt JZ, Dziubla TD: Analyte-responsive nanoparticles for the detection of polychlorinated biphenyls

Shellie R, Ragunathan K, Gooley A, Jones R: *The analysis of 209 PCB congeners using a novel capillary GC column stationary phase*

Behzadi H: Do's and don'ts of PFAS sampling and more

Qu GB, Wang YW, Shi JB, Ruan T, Liu JY, Song MY, Liu RZ, Liu AF, Zhang HY, Lin YF, Zeng LX, Yuan B, Ma QC, Liu GR, Zheng MH, Jiang GB: Identification of emerging pollutants in the environment

Stefanuto P-H, Scholl G, Miklášová Z, Stumpf C, Haedrich J, Focant J-F: Food and feed control using GC×GC-(MR)TOFMS: Dioxin measurements and beyond

Matsukami H, Hashimoto S, Suzuki G: GC-APCI/LC-ESI/QTOF-MS for the determination of brominated dioxins and brominated flame retardants released from flame-retarded product handling plants

Kukučka P, Audy O, Geng D, Stubleski J, Ericson-Jogsten I, Klánová J: Application of gas chromatography atmospheric pressure chemical ionization mass spectrometry for analysis of contaminants in environmental samples

Takakuwa H, Tobou K, Okuda M, Nakamura S, Nakano T: Analysis of polychlorinated dibenzo-p-dioxin and dibenzofurans in fly ash according to Japanese official method using gas chromatography triple quadrupole mass spectrometry with high efficiency EI source

Neugebauer F, Dreyer A, Lohmann N, Koschorreck J: Analysis of dechloranes and emerging brominated flame retardants with a multi-compound multi-matrix method and GC-API-MS/MS

Poster presentations

Choi JD, Shin Ch, Lim TS, Lee JE, Lee W-H, Kang G-J: Determination of polybrominated biphenyls (PBBs) *in food by gas chromatography coupled to electron ionization high-resolution mass spectrometry*

Eguchi A, Enomoto T, Mikami S, Mori C: *Investigation of analytical method for PCBs in serum sample using mini SPE cartridge with intelligent autosampler and gas chromatography - mass spectrometry*

Masato T: Comparison of the analysis result of dioxins in several hundreds of food and feed samples by using GC-MS/MS and Sector GC-MS

Mehlmann H, Krumwiede D: Latest advancements for maximized productivity for PBDE, dioxin and PCB analysis using DualData Mode with magnetic sector GC-HRMS

Mukai K, Fujimori T, Shiota K, Nishimura C, Ito N, Takaoka M: *Quantitative speciation of chlorine in electronic waste open burning soils: focus on water-insoluble fractions*

Puype F, Ackermann L: Evaluation of direct analysis in real time – high resolution mass spectrometry (DART-HRMS) for WEEE specific substance determination in polymers

Silva CR, Kelterer K, Souza CAM, Niwa NA, Tominaga MY, Masini JC: A simplified and efficient manual fractionation procedure for the simultaneous determination of PCDD/Fs, PCBs and PBDEs in environmental samples

Takemori H, Matsushita T, Tsujisawa Y, Inoue T, Takasuga T: Evaluation of Orbitrap GC-MS for dioxins and POPs analysis

Urbancova K, Sram RJ, Hajslova J, Pulkrabova J: *A new method for the simultaneous determination of phthalate and DINCH metabolites in human breast milk*

BIOCHEMISTRY AND TOXICOLOGY OF POPs (S 13)

Verbal presentations

Leonards P, Viberg H, Lee I, Buratovic S, Eriksson P: Metabolomics used to link molecular pathways with mice behaviour after a single dose of pesticides or PFHxS using

Drwal E, Rak A, Gregoraszczuk EL: Cell type dependent mechanism of polycyclic aromatic hydrocarbons (PAHs) mixtures action in human placental cells

Ertürk Arı P, Çakmak G, Ari A, Schins R, Burgaz S, Gaga EO: Genotoxicity of polycyclic aromatic hydrocarbons (PAHs) in size segregated PM samples collected from a thermal power plant area

Zajda K, Gregoraszczuk E: Composition dependent mechanisms of PAH mixtures action as tumor promotor and progressor in non-cancer and cancer ovarian granulosa cells

Luo Q, Li F, Xiang B: Roles of dysregulation of lipid metabolism in the development of lung cancer induced by *PAHs exposure*

Gogola J1, Hoffmann M1, Ptak A: Persistent endocrine-disrupting chemicals in human follicular fluid stimulate proliferation in granulosa tumor spheroids

Feng W, Zheng J, Mckinie SMK, Gamal El, Dong Y, Agarwal V, Fenical W, Kumar A, Cao Z, Moore BS, Pessah IN: Anthropogenic and biogenic organohalogens target and disrupt intracellular Ca2+ dynamics

Søfteland L, Olsvik PA: Toxicological application of co-culture of primary Atlantic salmon hepatocytes and kidney epithelial cells exposed to glyphosate, chlorpyrifos, benzo(a)pyrene and cadmium

Sheng N, Wang JH, Pan YT, Jiayin D: Comparison of toxicity between perfluorooctanoic acid (PFOA) and novel alternative hexafluoropropylene oxide trimer acid (HFPO-TA)

Wei Y, Xing X, Kang J, Qiu J, Zhong X: *Exposure to PBDEs impedes vascular development and alters gene expression related to angiogenesis and barrier function*

Koch C, Nachev M, Klein J, Köster D, Schmitz OJ, Schmidt TC, Sures B: Toxicity of degradation products of the commercially used polymeric flame retardant PolyFR following UV irradiation and heat treatment

Yang JH, Lee YJ: *Perfluorohexanesulfonate induces apoptosis of neural cell via NMDA receptor and subsequent PKC activation*

Qi Y, Wada H: Effects of decabromodiphenyl Ether (BDE-209) on ultrasonic communication in fighting of male adult rats

Poster presentations

Drwal E, Rak A, Gregoraszczuk EL: Two real life mixtures of polycyclic aromatic hydrocarbons (PAHs) have modulatory effect on hormonal status of human placenta cells

Kakutani H, Yuzuriha T, Nakao T, Ohta S: Dioxins disrupt the biological barrier function by aryl hydrocarbon receptor

Lee YJ, Park SJ, Yang JH: IgE-independent activation of mast cells by perfluoroalkyl compounds

Ohta C, Yamamoto K, Fujii Y, Haraguchi K, Kimura O, Endo T, Kato Y, Koga N: *In vitro metabolism of* 2,2',3,4',5,6,6'-*heptachlorobiphenyl (CB188) by rat liver microsomes*

Wnuk A, Rzemieniec J, Kajta M: *The effects of prenatal exposure to chemical UV-filter benzophenone-3 (BP-3) in the neuronal cells*

Yuzuriha T, Kakutani H, Nakao T, Ohta S: Investigation on effect of organophosphorus flame retardants (PFRs) on metabolic disease related receptors

BIOMONITORING AND LEVELS I: AN UPDATE AND OBESOGENS (S 14)

Verbal presentations

Petrlik J, Teebthaisong A, Bell L, Behnisch PA, Da M, Saetang P, Ritthichat A, Kalmykov D: *PCDD/Fs and PCBs in eggs – data from China, Kazakhstan and Thailand*

Helou K, Harmouche KM, Matta J, Sayegh N, Karaki S, Mahfouz M, Mahfouz Y, Narbonne J-F: Relationship between socio-demographic factors, dietary habits and anthropometric measures and PCBs, OCPs, dioxins, and furans in blood and breast milk of a group of Lebanese primiparous lactating women

Helou K, Karaki S, Harmouche Karaki M, Narbonne J-F: Review of available data on organochlorine pesticides and polychlorinated biphenyls residues in environment, food and humans in Lebanon

Lohmann N, Neugebauer F, Dreyer A, Ruedel H, Teubner D, Koschorreck J: Emerging flame retardants and legacy POPs in bream and other limnic samples of the German environmental specimen bank

Loganathan BG: POPs and obesity: Spatial and temporal trends

Malarvannan G, Van Hoorenbeeck K, Deguchtenaere A, Verhulst SL, Jorens PhG, Dirinck E, Van Gaal L, Covaci A: Persistent organic pollutants in human serum from obese adolescents and adults undergoing weight loss treatment

Sjödin A, Jones R, Vuong AM, Stapleton HM, Yolton K, Lanphear BP, Chen A: Polybrominated diphenyl ethers measured in serum of children enrolled in the HOME study

Fridén U, Aune M, Bignert A, Cantillana T, Glynn A, Gyllenhammar I, Lignell S: Levels of persistent organic pollutants (POP) in human milk from first-time mothers in Uppsala, Sweden: temporal trends for the time period 1996-2016

MacDonald AM, Kinniburgh DW, Gabos S, Lee B, Cheung PY, Ackah F, Reichert M, Graydon J, Lyon A, Jarrell J, Benade G: Biomonitoring of environmental chemicals in pooled pregnant women and cord blood serum samples: Results from the third phase of the Alberta biomonitoring program

Phillips S, Braeunig J, Vijayasarathy S, Harden F, Hobson P, Mueller JF, Toms L-ML: *PFAS serum concentrations decline in an Australian child population from* 2006 to 2015

Schacht VJ, Codling GP, Palát J, Klánová J: Multi residue screening of human serum using high-resolution GC Orbitrap

Zafeiraki E, Hoogenboom RLAP, Gebbink WA, Dassenakis E, van Leeuwen SPJ: Occurrence of perfluoroalkyl substances (PFASs) in European eel (Anguilla anguilla) and related human dietary exposure

Poster presentations

Pourchet M, Cariou R, Antignac JP, Le Bizec B: Screening emerging chemicals in human matrices to support biomonitoring and environmental health studies: methods, challenges and promises

Sajwan KS, Richardson JP, Powell B, Patel B, Rowan C: Environmental obesogens: contamination levels in environmental and biological samples from Savannah, Georgia, USA

Fiserova P, Kohoutek J, Klanova J: Determination of 18 phthalate metabolites and 2 alternative plasticizer metabolites in urine using high-throughput off-line SPE and LC-MS/MS

Hijiya M, Chiga H, Matsumura T, Sato N, Chisaki Y: Abundance ratio of dioxins in human blood fraction

Kirankumar PS, Sanath K, Ajay SV, Prathish KP, Ajit H: *Quantification of dioxins and dioxin- like PCB levels in fish samples collected from Periyar River, India*

Kunisue T, Egashira K, Isobe T, Nakayama K, Matsuishi T, Tajima Y, Yamada TK, Tanabe S: *Temporal trend analyses of POPs in three toothed whale species stranded along the Japanese coastal waters: importance of samples and data stored in es-BANK and ChemTHEATRE*

Ohta S, Kakutani H, Yuzuriha T, Nakao T: A mixture of TBBPA and TCDD disrupts adipocyte and osteoblast differentiation in human mesenchymal stem cells

Van Overmeire I, Joly L, Malarvannan G, Poma G, Covaci A, Colles A, Koppen G, Den Hond E, Van de Mieroop E, De Wolf M-Ch, Charlet F, Malysheva SV, Vanhouche M, Dussart A, Van Loco J, Van Nieuwenhuyse A, Andjelkovic M: Levels of organochlorinated pesticide residues and other persistent organic pollutants in breast milk: the Belgian results from the 6th WHO-coordinated survey

CONTAMINATED SITES – CASES, REMEDIATION, RISK AND MANAGEMENT (S 15)

Verbal presentations

Tagliabue M, **Bagatin R**, **Careddu G**, **Manuela G**, **Perucchini S**, **Bellettato M**, **Montanari E**: *Effect of attrition on pesticide contaminated soil*

Thomsen C, Haug LS, Casas M, Robinson O, Chatzi L, Gražulevičienė R, Slama R, Wright J, Meltzer HM, Gutzkow K, Coen M, Van den Hazel PJ, Nieuwenhuijsen M, Vrijheid M: The human early life exposome project (HELIX): The chemical exposome of pregnant women and their children in Europe

Vijgen J, de Borst B, Weber R: HCH-waste generated by Lindane production - EU cases and strategies how to solve a 40-70 years old POPs Legacy

Kurt-Karakus P, Odabasi M, Birgul A, Yaman B, Gunel E, Dumanoglu Y: Environmental contamination by obsolete pesticide stockpiles in Turkey: Case study for Derince Province

Wyrzykowska-Ceradini B, Oudejans L, Tabor D, Starr J, Mysz A, Stout II DM, Snyder E, Lemieux P, Nardin J, Morris E: Development of liquid-based decontamination methods of indoor surfaces after simulated misuse of common pesticides

Ueno D, Koyano S, Kajiwara N, Yamamoto T: Contamination status of POPs as wood preservatives in recycled products of waste woods in Japan

Teebthaisong A, Petrlik J, Ritthichat A, Saetang P, Strakova J: POPs contamination at 'recycling' and metallurgical site in Thailand

Akortia E, Lupankwa M, Okonkwo JO: Transport and retention of polybrominated diphenyl ether in soil from *e-waste dump in Ghana and landfill site in South Africa: A laboratory-scale column soil flushing approach*

Monfort O, Hanna K: Ferrate(VI) oxidation as promising treatment in remediation of soil contaminated by PCBs

Ross I, Lagowski J, Dickson M, Storch P: Full-scale treatment of PFAS-impacted wastewater using ozofractionation with treatment validation using TOP assay

Yeung LWY, van Hees P, Karlsson P, Söderlund L, Filipovic M: Total fluorine, extractable organofluorine, per/polyfluoroalkyl substances and total oxidizable precursor assay on contaminated soil

Capozzi SL, Kjellerup BV: Colonization and growth of PCB respiring biofilms on carbonaceous amendments

Choi GH, Song AR, Moon BY, Jung GH, Park JH, Ryu SH, Lim SJ, Park BJ: Endosulfan uptake of perilla shoot and decrease of endosulfan uptake and soil concentration by granular activated carbon amendment

De la Torre A, Navarro I, Sanz P, Arjol MA, Fernández J, Martínez MA: Dumpsite dismantling influence on HCH air levels: Sabiñánigo case

Folarin BT, Abdallah MA, Oluseyi T, Harrad S, Olayinka K: Concentrations of polychlorinated biphenyls in soil and indoor dust associated with electricity generation facilities in Lagos, Nigeria

Niarchos G, Sörengård M, Jensen PE, Ahrens L: Electro dialytic remediation of per- and polyfluoroalkyl substance (PFAS) - contaminated soil

Noone C, Houlihan M, Keogh M, Ó Riordain C, Smith H, Tierney J: An investigation of elevated dioxin levels in ovine livers in Ireland

Pandelova M, Bussian BM, Henkelmann B, Schramm K.-W: Soil-water partition coefficients (Kd) and translocation of POPs in soils

Weidlich T: Alternative method for decontamination of solid materials contaminated by polychlorinated dibenzodioxins/dibenzofurans

Zhou H, Zhao G: Microbial diversity and activity of an aged soil contaminated by polycyclic aromatic hydrocarbons

DIOXINS AND OTHER POPs IN VIETNAM AND HUMANS AFTER AGENT ORANGE (S 16)

Verbal presentations

Minh NH, Hue NTM, Thuong NV, Mai PTN: Site-specific bioaccumulation of polychlorinated dibenzo-pdioxins and polychlorinated dibenzofurans (PCDD/PCDFs) in mothers and their infants living in vicinity of Bien Hoa Airbase, Southern Vietnam

Nishijo M, Pham NT, Pham TT, Tran NN, Le VQ, Tran HA, Phan HAV, Nishino Y, Nishijo H: Perinatal dioxin exposure and neurodevelopment of 2-year-old Vietnamese toddlers in the largest hot spot of Agent Orange contamination in Vietnam

Pham The T, Nishijo M, Tai PhT, Nghi TN, Quan LV, Anh TH, Anh Vu PhV, Nishino Y, Nishijo H: *Effects of dioxin exposure on gaze behaviour in 3-year-old children in Vietnam*

Kido T, Oanh NTP, Honma S, Oyama Y, Anh LT, Phuc HD, Nakagawa H, Nakayama SF, Nhu DD, Tung DV, Minh NH, Toan NV: Steroid hormones disruption in 5-year-old children in two dioxin hotspot areas in Vietnam

Pham The T, Nishijo M, Pham Ngoc T, Tran Ngoc N, Hoang Van T, Hoang Van L, Tran Hai A, Nishijo H: Effects of perinatal dioxin exposure on learning ability of Vietnamese 8-9 years old children

Wannomai T, Matsukami H, Uchida N, Takahashi F, Le HT, Pham HV, Takahashi S, Kunisue T, Suzuki G: Bioaccessible flame retardants in dusts from e-waste-processing workshops in northern Vietnam

Schecter A, Kincaid J, Lu H, Birnbaum L: Serum levels of dioxins, furans, PCBs, and dioxin toxic equivalents (TEQs) in Vietnamese female electronic waste recyclers compared to Vietnamese non-recyclers

Nam VD, Trung NQ, Hung NX, Xuyen NT, Thuy LM, Giang LT: *Preliminary investigation of levels of polychlorodibenzo-p-dioxins and polychlorodibenzofurans in fresh cow milk samples in Hanoi, Vietnam*

Poster presentations

Hai Le LT: Setting national regulatory for POPs/dioxin in soil based on human health risk approach

ECOTOXICOLOGY AND ENVIRONMENTAL TOXICOLOGY OF POPs (S 17)

Verbal presentations: 1

de Wit CA, Johansson AK, Sellström U, Lindberg P: *Input – output study of brominated flame retardants in female captive peregrine falcons*

Eljarrat E, Aznar-Alemany Ò, Sala B, Frías Ó, Barceló D, Blanco G: Halogenated flame retardants in birds from central Spain: PBDE levels still very high

Aznar-Alemany Ó, Sala B, Plön S, Bouwman H, Barceló D, Eljarrat E: Halogenated and organophosphorus flame retardants in cetaceans from the Indian Ocean

Muñoz-Arnanz J, Bartalini A, Capanni F, Marsili L, Fossi MC, Jiménez B: Assessment of dl-PCBs, PCDD/Fs and PBDEs in striped dolphins and sperm whales from the Mediterranean Sea

Jeong Y, Gu B-N, Park G-J, An Y-R, Moon H-B: Assessment of prenatal exposure to POPs during second trimester using mother-fetus pairs of finless porpoises (Neophocaena asiaeorietalis)

Jepson PD, Deaville R, Barber JL, Brownlow A, Law RJ: *High extinction risk: severe PCB pollution in European killer whales (Orcinus orca)*

Yoshinouchi Y, Hirano M, Nakata H, Nomiyama K, Tanabe S, Kim EY, Iwata H: *In vitro and in silico approaches for assessing the activation of Baikal seal estrogen receptors by bisphenols and OH-PCBs*

Verbal presentations: 2

Tongue ADW, Drage DS, Harrad S, Reynolds SJ, Fernie KJ: Feeling the heat: Gulls as bioindicators of flame retardant emissions from UK landfill

Huang WX, Tsai PC, Ngo TH, Wu CP, Ueng YF, Chi KH: Assessing the cytotoxicity and genotoxicity of chemical components in fine particulate matters (PM_{2.5}) from different areas in Taiwan

Qadir A, Nadeem S, Hassan A, Mehmood A, Mumtaz M, Ahmad SR, Li J, Zhang G: Evaluation of polycyclic aromatic hydrocarbons (PAHs) in webs of eresid spider from Punjab, Pakistan

Qadir A, Nadeem S, Hassan A, Mehmood A, Mumtaz M, Ahmad SR, Li J, Zhang G: Evaluation of polycyclic aromatic hydrocarbons (PAHs) in eresid spider from Punjab, Pakistan

Sheng N, Wang JH, Pan YT, Jiayin Dai J: *Comparison of toxicity between perfluorooctanoic acid (PFOA) and novel alternative hexafluoropropylene oxide trimer acid (HFPO-TA)*

Shi GH, Dai JY: Parental exposure to 6:2 chlorinated polyfluorinated ether sulfonate (F-53B) impairs transgenerational reproductive capability in zebrafish

Poster presentations

Gworek B, Kijeńska M, Wrzosek J, Tokarz L, Graniewska M, Stępień W: Incorporation of carbamazepine to the biological cycle – red beets as bioindicators

Kijeńska M, Gworek B, Wrzosek J, Tokarz L, Graniewska M, Stępień W: Sewage sludge as a source of dioxins in the biological chain

Manhães BMR, Santos-Neto EB, Vidal LG, Bisi TL, Azevedo AF, Lailson-Brito J: High organochlorine concentrations in a threatened Guiana dolphin population

Ortuño N, Íñiguez ME, Soler A, Moltó J, Conesa JA: Sorption of PAHs and other organic pollutants to plastics present in marine debris

Pozo K, Gomez V, Torres M, Audy O, Martinik J, Karaskova P, Pribylova P, Klanova J: Persistent organic pollutants (POPs) in the marine food web from Central Chile

EMISSION, CONTROL AND CLEANUP (S 18)

Verbal presentations

Kuo Ch-H, Trinh M-H, Chang M-B: Characterization of PCDD/Fs and dl-PCBs emission from combustion of PCB-containing oil in a fluidized bed incinerator

Peng Z, Sun Y, Yan D, Karstensen KH: PCDD/Fs, dl-PCBs, chlorobenzenes emission from cement kiln stack using refuse derived fuel generated from municipal solid waste

Aleksandryan AV, Khachatryan AV: Dioxins/furans emissions from different source categories: Biomass burning and forest fires

Yoon YS, Kwon EH, Bae JS, Jeon TW, Lee YK: *Analysis of dioxins emission characteristic during thermal treatment of chlorinated flame retardant and organochlorine pesticides*

Ajay SV, Kirankumar PS, Sanath K, Prathish KP, Ajit H: First study on the determination of emission factors of dioxins from the open burning of municipal solid waste in India

Aleksandryan AV, Khachatryan AV, Kočan A, Šebková K: Results of analyses for PCDDs/PCDFs emissions at open burning

Andersson S: Sulfur recirculation for reducing dioxin formation in waste-to-energy plants

Moreno AI, Font R, Conesa JA, Gómez-Rico MF: Inhibition effect of polyurethane waste in PCDD/F formation

Du C, Tang M, Lu S: Ball milling prepared V_2O_5/TiO_2 catalysts for the catalytic decomposition of 1,2-DCBz

Hsu Y-Ch, Chang S-H, Chang M-B: Removal of tricholorethylene from water with LaFeO3 as photocatalyst

Jing L, Zhiyong X, MacLeod M, Ch T, Emeis K-Ch, Ebinghaus R: Gridded atmospheric emission inventories of organophosphate flame retardants in China

Poster presentations

Konieczny T, Komosiński B, Bobik B, Czaplicka M: Concentration of PCDD/F in ambient air in the immediate vicinity of the sewer sludge incineration plant and the biogas-fired combined heat and power plant

Soler A, Iñiguez ME, Ortuño N, Conesa JA: Pollutant emission during pyrolysis of e-waste dechlorinated in subcritical water

Yoon YS, Kwon EH, Bae JS, Jeon TW, Lee YK: Analysis of dioxins emission characteristic during thermal treatment of hexachlorobutadiene

ENDOCRINE DISRUPTION I: BIOCHEMICAL AND MOLECULAR MECHANISMS (S 19)

Verbal presentations

Chenyang J, Meirong Z: Estrogen disrupting effect and ecological risk assessment of PHCZs by multi-model

Hoffmann M, Gogola J, Ptak A: GPR30 mediates the effect of tetrabromobisphenol A, but not tetrachlorobisphenol A on ovarian cancer cell proliferation

Kubota A, Wakayama Y, Lee JS, Nakamura M, Kawai Y, Yoshinouchi Y, Iwata H, Hirano M, Nakata H: Evaluating estrogenic and anti-estrogenic potency of bisphenol A analogues in vivo and in silico using zebrafish

Liang Y, Zhou Z, Cao H, Zhang W, Wang L: *The respiratory toxicity and anti-estrogenic effect of tris (2, 3-dibromopropyl) isocyanurate*

Schilte CFM, Bos AF, Sauer PJJ, Berghuis SA: *The effects of prenatal persistent organic pollutant exposure on behavioural problems in puberty*

Poster presentations

Arizono K, Uchida M, Fukushima S, Ishibashi H, Tominaga N: Nanosecond pulsed electric field incorporation technique to predict teratogenicity and toxicity of equine estrogens on medaka embryos

Boonen I, Vandermarken T, De Nys S, Vervliet P, Covaci A, Van Landuyt K, Denison MS, Elskens M: *Estrogenic activity of monomers and initiators used in resin based dental composites*

Budinsky B, Passage J, Sriram S, Aylward L, Johnson K: TCDD and TCDF effects on fetal rat pituitary and testicular hormone pathways

Denison MS: In vitro and cell-based bioassays for the detection and characterization of activators and inhibitors of estrogen receptor a and β signaling

Hsu PC, Guo YL, Chiang HC, Zhong JY, Pan JJ: *Transgenerational effects of Di-(2-ethylhexyl) phthalate* (DEHP) on sperm DNA methylation in rats

Kajta M, Wnuk A, Rzemieniec J, Wójtowicz AK: Triclocarban induces AHR- and CAR-mediated apoptosis in mammalian neurons

ENDOCRINE DISRUPTION II: TYROIDOGENICITY, EXPOSURE AND HEALTH (S 20)

Verbal presentations

Andersson PL, Zhang J, Li Y, Nam K, Grundström C, Iakovleva I, Brännström K, Olofsson A, Sauer-Eriksson E: Identification of potential thyroid hormone disrupting chemicals

Goodrum PE, Budinsky RA, Mendelsohn E, Summers H: Use of thyroid disease incidence and dose-response analysis to reduce uncertainty in the dioxin oral reference dose

Kato Y, Tamaki S, Haraguchi K, Fujii Y, Kimura O, Ohta C, Endo T, Koga N, Degawa M: Involvement of transthyretin to Kanechlor-500-mediated changes in serum and hepatic thyroxine levels in mice

Liu X, Zhang L, Li J-G, Zhao Y-F, Wu Y-N: Serum levels of POPs in early pregnancy and risk of gestational diabetes mellitus

Pang S, Wang F, Li A, Gao Y, Liang Y, Song M: Tetrabromobisphenol A interferes the onset of blood circulating in zebrafish embryo through disrupting thyroid hormone signal

Ruis MT, Rock K, Hall SM, Horman B, Patisaul HB, Stapleton HM: *Tissue-specific accumulation of PBDEs in placental tissues and effects on thyroid hormone regulation*

Poster presentations

Shi Z, Chen T, Tian L, Huang P, Li J: *Elevated serum decabrominated diphenyl ethers (BDE-209) and alteration of thyroid hormones in workers from a deca-BDE manufacturing plant*

Wada H, Qi V: Effects of Decabromodiphenyl Ether (BDE-209) on ultrasonic communication in mating behavior of rats

ENDOCRINE DISRUPTION III: MULTI-MODELS, MIXTURES, AND TRANSLATION (S 21)

Verbal presentations

Arkenbout A, Olie K, Esbensen KH: *Emission regimes of POPs of a Dutch incinerator: regulated, measured and hidden issues*

Doan TQ, Muller M, Berntsen HF, Zimmer KE, Verhaegen S, Ropstad E, Connolly L, Scippo ML: *A* realistic mixture of Persistent Organic Pollutants (POPs) reveals possible synergism to inhibit the transactivation activity of the aryl hydrocarbon receptor (AhR) in vitro

Leijs ML, Esser A, Schettgen T, Fietkau K, Merk HF, Koppe J, Kraus T, Baron JM: Effects of persistent organic compounds on the skin; filtering out effects of exposure to multiple congeners and compounds

Koetsier J, Leijs M, van de Sluis K, Koppe J: Acetaminophen toxicity in the human fetus

Muir T, Michalek JE, Palmer R: Integrating exposure, toxicology and epidemiology: a prototype for multimodel, translation, and mixtures study – An update on sample size and lipid-wet weight contrasts

ENVIRONMENTALLY PERSISTENT FREE RADICALS (S 22)

Verbal presentations

Al-Nu'airat J, Dlugogorski BZ, Gao X, Altarawneh M: Formation of environmentally persistent free radicals induced by iron oxide nanoparticles

Assaf NW, Altarawneh M, Radny M, Dlugogorski BZ: Formation of phenoxy-type EPFR over hydrated pure alumina and Si-doped alumina surfaces

Chen T, Lin X, Wang T, Zhan M, Li X: *Effects of temperature, atmosphere and metal catalysts on the formation of PCDD/Fs and EPFRs from 1,2,3-trichlorobenzene*

Harmon A, Noel A, Subramanian B, Jennings M, Chen Y, Penn A, Varner K, Dugas T: Exposure to environmentally persistent free radicals leads to decreased vascular responsiveness prior to deficits in pulmonary function

Liu GR, Yang LL, Zheng MH: Effects of metal oxides on environmentally persistent free radical formation and transformation

Lomnicki S, Hassan F, Bruce-Keller A, Guo ChQ: *PM air pollution – are EPFRs (Environmentally Persistent Free Radicals) a marker of PM's health impacts?*

Vejerano EP, Mamun M, Ahn JH: Research trajectory for environmentally persistent free radicals

EPIDEMIOLOGY (S 23)

Verbal presentations

Berghuis SA, Bos AF, Sauer PJJ, Bocca G: *Prenatal exposure to persistent organic pollutants and anthropometric measures in adolescents*

Haga Y, Suzuki M, Matsumura C, Okuno T, Tsurukawa M, Fujimori K, Kannan N, Weber R, Nakano T: Monitoring of OH-PCBs in PCB transport worker's urine for a non-invasive exposure assessment tool

Lazar F, Bacher S, Göen T, Stiegler H, Hölzer J: LDL-Cholesterol in PFOA-exposed residents from Arnsberg, *Germany – results of a cohort study 2006-2017*

Webster TF, Oken E, Harris M, Mora AM, Preston E, Fleisch A, Rifas-Shiman S, Sagiv SK: Exposure to PFAS and childhood development: Studies from project Viva

Webster TF, Weisskopf MG: *Biomarkers of exposure to persistent organic pollutants: Blessing and curse for epidemiology?*

Poster presentations

Drobná B, Fabišiková A, Čonka K, Gago F, Oravcová P, Wimmerová S, Šovčíková E: PBDE serum concentration and pre-school maturity of children from Slovakia

Long M, Wielsøe M, Ghisari M, Bech BH, Henriksen TB, Olsen J, Bonefeld-Jørgensen EC: Dioxin-like POPs induced aryl hydrocarbon receptor transactivity in the Danish pregnant women and fetal growth outcomes

EXPOSURE – FOOD CHAIN, MATERNAL, INDOOR, OCCUPATIONAL AND ACCIDENTAL (S 24)

Verbal presentations

Bastiaensen M, Ait Bamai Y, Araki A, Van den Eede N, Kishi R, Covaci A: Determinants of exposure to phosphate flame retardants for Japanese schoolchildren

Coggins M, Wemken N, Drage DS, Cellarious C, Cleere K, Morrison J, Daly S, Abdallah M, Tlustos C, Harrad S: Brominated flame retardants (BFRs) in human breast milk collected from first time Irish mothers, 2016 – 2018 – ELEVATE

Hulin M, Sirot V, Traore T, Cravedi J-P, Vasseur P, Jean J, Carne G, Le Bizec B, Riviere G.: French infant total diet study: exposure to dioxins and PCBs

Kademoglou K, Giovanoulis G, Palm-Cousins A, Padilla-Sanchez JA, Magnér J, de Wit CA, Collins ChD: Sniffing out the plastic: inhalation bioaccessibility of phthalate esters and alternative plasticisers present in indoor dust using simulated lung fluids

Li L, Qiu Y, Weiss J, Gustafsson Å, Thomas L, Krais MA, Bergman Å: Physical and chemical characterization of a respirable dust fraction from residential houses in Shanghai, China

Pruvost--Couvreur M, Desvignes V, Roudot AC, Rivière G and the Contalait Study group: Assessment of the impact of breastfeeding duration on PCBs and PCDD/Fs body burdens using PBPK modeling

Richterová D, Fábelová L, Patayová H, Pulkrabová J, Rausová K, Šovčíková E, Štencl J, Hajšlová J, Trnovec T, Palkovičová Murínová L: Determinants of prenatal exposure to perfluoroalkyl substances in the Slovak birth cohort

Shindo M, Terao K, Muramatsu K, Tokumura M, Wang Q, Miyake Y, Amagai T, Makino M: *Estimating potential dermal exposure to organophosphorus flame retardants via direct contact with products*

Tokumura M, Muramatsu K, Wang Q, Miyake Y, Amagai T, Makino M: Comparison of rates of direct and indirect migration of phosphorus flame retardants from flame-retardant-treated polyester curtains to indoor dust

Nakao T, Kakutani H, Yuzuriha T, Ohta S: Contamination level of organo phosphorus flame retardants (OPFRs) in human breast milk of Japan

Warenik-Bany M, Struciński P, Piskorska-Pleszczyńska J: *Exposure to dioxins and dl-PCB as a result of venison consumption*

Wemken N, Drage DS, Abdallah M. Harrad S, Coggins M: An assessment of the exposure of the Irish population to selected brominated flame retardants via indoor air and dust

Yin SS, Liu WP: Enantiomeric fractions of chiral OCPs in trans-placental transfer

Zhu Q, Liao Ch: *Phthalate esters in indoor dust from several regions, China and its implication for human exposure*

Zieliński M, Grešner P, Ligocka D, Polańska K, Gromadzińska J, Hanke W, Wąsowicz W: Environmental exposure to persistent organic pollutants and markers of oxidative stress in women during pregnancy and lactation

Poster presentations

Abafe OA, Martincigh BS: Cumulative human exposure to a cocktail of organohalogenated flame retardants in the indoor environment

Been F, Bastiaensen M, Malarvannan G, Yin S, Yao Y, Schepens T, Jorens Ph, Covaci A: *Exposure to phosphorous flame retardants (PFRS) and alternative plasticizers in intensive care patients*

Christia C, Poma G, Covaci A: Brominated and organophosphorus flame retardants in indoor dust from Belgium: Exposure assessment via non-dietary pathways

Christia C, Poma G, Harrad S, de Wit C, Leonards PEG, Lamoree M, Covaci A: Occurrence of legacy and current-use plasticizers in indoor dust from various EU countries

Fromme H, Albrecht M, Janitzki N, Wollin KM, Aschenbrenner B: Occurrence of chlorinated and brominated dioxins/furans (PBDD/Fs, PBBD/Fs), and polychlorinated biphenyls (PCBs) in German breast milk (LUPE 8)

Imamura M, Takatsuki S, Tsutsumi T, Maeda T, Akiyama H: Estimated dioxin intakes from commercial baby foods in Japan

Lignell S, Aune M, Cantillana T, Darnerud PO, Fridén U, Glynn A: Dioxins and PCBs in a Swedish food market basket study - dietary intake estimations and temporal trends

Pruvost--Couvreur M, Rivière G, Le Bizec B, Béchaux C: Development of a statistical method to assess the dietary lifetime exposure to PCBs from punctual measurements

Takekuma M, Hayashi M, Kim H, Osawa H: A survey of indoor air chemical contaminants in newly built detached houses

Tian L, Huang P, Li P, Shi Z: Brominated flame retardants in indoor dust from Beijing, China: *Contamination level, human exposure and evidence for PBDEs replacement*

EXPOSURE – POPs IN PETS AND THEIR APPLICABILITY AS MODELS FOR HUMAN HEALTH (S 25)

Verbal presentations

Brits M, Rohwer ER, De Vos J, Weiss JM, Brandsma SH, de Boer J: Analysis of brominated and organophosphorus flame retardants and chlorinated paraffins in South African indoor dust and cat hair

Khidkhan K, Mizukawa H, Ikenaka T, Nakayama S, Darwish WS, Nomiyama K, Takiguchi M, Yokoyama N, Ichii O, Tanabe S, Ishizuka M: *Tissue distribution and CYP expression related-PCBs exposure in cats*

Nomiyama K, Eguchi A, Mizukawa H, Yamamoto Y, Nishikawa H, Takiguchi M, Nakayama S, Ikenaka Y, Isizuka M, Tanabe S: Pilot study on the toxicological assessment of organohalogen compounds in pet cat (Felis catus) serum using metabolomics approach

Weiss J, Andersson P, Hamers T, Legradi J, Lamoree M, Jones B, Bignert A, Carlsson G, Bergman Å: *Cats exposure to organic contaminants and potential effects on the thyroid hormone system*

Tamura S, Agusa T, Hirano M, Eguchi A, Nomiyama K, Li L, Kannan K, Tanabe S, Kim EY, Iwata H: *PCBs as an environmental obesogen in dogs: evidence from hepatic transcriptome, metabolome, and lipidome analyses*

Poster presentations

Kannan K, Karthikraj R, Borkar S, Lee S: Parabens and melamine in pet urine from New York State, United States

Khidkhan K, Mizukawa H, Ikenaka Y, Nakayama S, Nomiyama K, Takiguchi M, Yokoyama N, Ichii O, Tanabe S, Ishizuka M: *The estimation of potential PCBs toxicity in cats by evaluating CYP450 expressions*

Mizukawa H, Khidkhan K, Ikenaka Y, Nakayama SMM, Nomiyama K, Yokoyama N, Ichii O, Takiguchi M, Tsend-ayush S, Tanabe S, Ishizuka M: Effects of polychlorinated biphenyls (PCBs) in cats: Exhaustive gene expression analysis approach

Shimasaki M, Nomiyama K, Mizukawa H, Saengtienchai A, Ngamchirttakul A, Pencharee D, Ikenaka Y, Nakayama S, Kunisue T, Tanabe S: Contamination status and global comparison of organohalogen compounds and their related compounds in the pet cats from Thailand

FATE AND BEHAVIOR OF VOLATILE METHYLSILOXANES IN THE ENVIRONMENT (S 26)

Verbal presentations

Dumanoglu Y, Yaman B, Odabasi M: Seasonal variations of cyclic and linear volatile methylsiloxanes in an urban atmosphere

Horii Y, Minomo K, Ohtsuka N, Motegi M, Takemine S, Hara M: Regional characteristics and annual and diurnal variations of methylsiloxanes in the atmospheric environment, Saitama, Japan

Horii Y, Taniyaus S, Yamazaki E, Falandysz J, Yamashita N: Volatile methylsiloxanes as important alternatives to PFASs

Kim J, Mackay D, Whelan MJ: Dynamic behaviors of linear and cyclic volatile methylsiloxanes in global and local environments

Li Y-F: Prediction of slopes and intercepts from log-log correlations of gas/particle quotient and vapor-pressure and octanol-air partition coefficient for SVOCs

Ratola N, Homem V, Rocha F, Capela D, Silva JA, Ramos S, Jiménez-Guerrero P, Castro-Jiménez J, Alves A: Assessing volatile methylsiloxanes in coastal areas

Warner NA, Nikiforov V, Krogseth IS, Kierkegaard A, Bohlin-Nizzetto P: *Reducing sampling artifacts in air measurements: Improvement of active air sampling methodologies for accurate measurements of cyclic volatile methylsiloxanes in remote regions*

Xu S, Miller J, Annette Vogel A: Modeling assessment and experimental measurements of snow scavenging of octamethylcyclotetrasiloxane (D4) and decamethylcyclopentasiloxane (D5)

Poster presentations

Durham J, McNett DA, Boehmer T, Kozerski GE, Xu S: Identification and reduction of analytical bias for analysis of silicon containing materials

Homem V, Capela D, Espregueira C, Ratola N: Screening of volatile methylsiloxanes in sand from Portuguese beaches

HALOGENATED PAHs AND PAHs (S 27)

Verbal presentations

Asakawa D, Tojo T, Ichihara M, Matsumura C, Hasegawa H, Miyawaki T, Nishino T: Development of LC-DA-APPI-MS/MS method for determination of nitrated polycyclic aromatic hydrocarbons and its diurnal variations during transboundary air pollution events

Szternfeld Ph, Marchi J, Chao S, Broos J, Joly L: Modular method for polycyclic aromatic hydrocarbons determination in spices and dried herbs by GC-MS/MS

Sei K, Wang Q, Masuda M, Tokumura M, Miyake Y, Amagai T: *An analytical method for chlorinated polycyclic aromatic hydrocarbons in particles by thermal desorption-GC/MS*

Gao P, da Silva E B, Townsend T G, Ma L Q: Background and bioaccessible concentrations of PAHs in Florida urban soils

Huo Ch-Y, Sun Y, Liu L-Y, Wen-Long Li, Ed Sverko, Hai-Ling Li, Zhang Z-F, Ma W-L, Song W-W, Yi-Fan Li: Centered accumulation and equilibrium of PAHs on indoor window films and the influence of central heating

Liu GR, Jin R, Zheng M, Yang L, Xu Y, Li C: Field investigation on the releases of halogenated polycyclic aromatic hydrocarbons from cement kilns with sewage sludge co-processed

Lyu J-M, Chi K-H, Chang M-B: Characteristics of PM2.5 and polycyclic aromatic hydrocarbons emitted from coal combustion processes

Ngo TH, Yang HY, Pan SY, Hsu WT, Hung PC, Chou CCK, Wu CP, Chi KH: Polycyclic aromatic hydrocarbons emission in stack gases and source apportionment in Taiwan atmosphere

Stec AA: Occupational exposure to polycyclic aromatic hydrocarbons and elevated cancer incidence in firefighters

Urbancova K, Lankova D, Sram RJ, Hajslova J, Pulkrabova J: Comparison of monohydroxylated metabolites of polycyclic aromatic hydrocarbon concentrations in urine samples collected from mothers and their newborns living in two localities of the Czech Republic

Masuda M, **Wang Q**, **Masahiro TM**, **Miyake Y**, **Amagai T**: Unintentional occurrences of chlorinated polycyclic aromatic hydrocarbons in grilled food and its cooking exhaust

Wu G, Sun Y, Jiang Ch, Lu Y: Research on pollution prevention and control BAT of chlorinated aromatics in secondary copper industry

Xiu M, Wang X, Mueller J, Beecroft A, Morawska L, Thai KPh: *Emission of particulate matter, VOCs and PAHs from different asphalt mixes*

Haga Y, Yoshiki R, Matsumura C, Yamasaki T, Nakagoshi A, Fujimori K, Tojo T, Hasegawa H, Miyawaki T, Nishino T, Nakano T: Spatial distribution and risk assessment of polycyclic aromatic hydrocarbons (PAHs) in sediments in Hyogo Prefecture, Japan

Zhe X, Marvin C, Thomas PJ, Johnson W, Francisco O, Idowu I, Stetefeld J, Crimmins B, Tomy GT: Identification of halogenated polycyclic aromatic compounds in biological samples from Alberta oil-sands region

Poster presentations

Matsumura C, Haga Y, Yoshiki R, Nakatsubo R, Kon G, Okamura H, Dan T, Tojo T, Hasegawa H, Miyawaki T, Nishino T, Nakano T: Analysis of organic pollutants contained in soot from marine diesel engines

LEGACY AND EMERGING FLAME RETARDANTS I : ENVIRONMENTAL LEVELS AND HUMAN EXPOSURE (S 28)

Verbal presentations

Malak IA, Cariou R, Dervilly-Pinel G, Jaber F, Le Bizec B: Dechlorane related compounds dietary exposure in the Lebanese population

Chessa G, Cossu M, Ledda G, Piras P, Fiori G, Sanna A, Marrosu R, Brambilla G: Occurrence of kexabromocyclododecanes (HBCDDs) in seafood from the Sardinia Sea - FAO 3.1.3 area and its impact on human health within the Marine Framework Strategy Directive

Dreyer A, Neugebauer F, Rüdel H, Paulus M, Lohmann N, Rauert C, Koschorreck J: Halogenated flame retardants in biota samples from the German North- and Baltic Sea

Ganci AP, Vane CH, Abdallah MA, Moehring T, Harrad S: Legacy PBDEs and NBFRs in surficial sediments of the River Thames, UK

Niu D, Qiu Y, Li L, Zhu Z, Yin D, Zhao J, Bergman Å: Levels and human exposure of novel brominated flame retardants in floor and elevated surface house dust from Shanghai, China

Qiu Y, Li L, Niu D, Zhu Z, Huang Q, Yin D, Zhao J, Bergman Å: Size distribution of organophosphate flame retardants in settled house dust from Shanghai, China

Zhou L, Püttmann W: Occurrence and distribution of organophosphate flame retardants (OPFRs) in indoor dust from shops, homes and offices of the Rhine/Main region, Germany

Verbal presentations

Gys C, Kovačič A, Huber C, Oh J, Ahn YA, Kim S, Lai FY, Heath E, Covaci A: Screening of in vitro and in vivo metabolites of bisphenol S by liquid chromatography coupled to quadrupole time-of-flight mass spectrometry

Kim H-J, Lee Ch-H, Kim D-H, Oh J-E, Kim Ch-G: Study on distributional characteristics of brominated flame retardants (PBDEs) according to land use of Seoul metropolitan region in Republic of Korea

Yaman B, Dumanoglu Y, Odabasi M: Atmospheric concentrations and gas – particle partitioning of organophosphate flame retardants in Izmir, Turkey

Genisoglu M, Sofuoglu A, Kurt-Karakus PB, Birgul, A, Sofuoglu SC: Alternative (novel) brominated flame retardants in PM1, PM10 and settled dust in a computer technical service

McGrath TJ, Morrison PD, Ball AS, Clarke BO: Legacy and novel brominated flame retardants in indoor dust in Melbourne, Australia: An assessment of human exposure

Tao F, Sellström U, de Wit CA: Organohalogenated and organophosphorus flame retardants in office air and dust in Sweden

Poster presentations

Kannan K, Kim U-J: Occurrence and distribution of organophosphate flame retardants in surface waters, tap water, and rainwater from New York State, USA

Pietroń W, Pajurek M, Mikołajczyk Sz, Maszewski S, Warenik-Bany M, Piskorska-Pliszczyńska J: *Exposure to PBDEs associated with farm animal meat consumption*

Poma G, Liu Y, Cuykx M, Tang B1, Luo XJ, Covaci A: Occurrence of organophosphorus flame retardants (PFRs) in edible and wild insects from China

Poma G, Sales C, Bruyland B, Christia C, Goscinny S, Van Loco J, Covaci A: *Can food processing influence the level of contamination with organophosphorus flame retardants and plasticizers (PFRs) in Belgian foodstuffs?*

Ruggeri MF, Poma G, Malarvannan G, Covaci A, Puliafito SE, Altamirano JC: Preliminary assessment of OPEs levels in atmospheric samples from Mendoza City, Argentina

Yang W, Zhu Ch, Xu P, Du B, Dong L, Huang Y: Levels and distribution of hexabromocyclododecanes in surface waters and sediments from Mihe basin of Shandong Province, China

Yasutake D, Sato T, Hori T, Watanabe T: Estimation of dietary intake of Dechlorane Plus and related compounds in a Japanese National Survey

Yui K, Motoki T, Kato H, Kajiwara N, Kuramochi H, Sakai S, Wania F: Measurement of vapor pressures of some selected polybrominated aromatic flame retardants and evaluation of vapor pressure estimation models

LEGACY AND EMERGING FLAME RETARDANTS II: METABOLISM AND TOXICOKINETICS (S 29)

Verbal presentations

Abdallah MA, Nguyen KH, Harrad S: First insight into human extrahepatic metabolism of flame retardants: Biotransformation of EH-TBB and Fremaster-550 by human skin subcellular fractions

Hou X, Liu J, Jiang G: Glycosylation of TBBPA in hydroponic exposed pumpkin plants

James MO, Cisneros KV, Agarwal V: Sulfonation and glucuronidation of hydroxylated bromodiphenyl ethers

Phillips AL, Stapleton HM: Inhibition of human liver carboxylesterase by organophosphate flame retardant & plasticizer esters: Implications for pharmacotherapy

Wei Y, Xing X, Kang J, Qiu J, Zhong X: *Exposure to PBDEs impedes vascular development and alters gene expression related to angiogenesis and barrier function*

Poster presentations

Feng M, Yin H: *Comparative proteomics reveal the interaction mechanism of co-existed tetrabromobisphenol A* (*TBBPA*) *and Cr*(*VI*) *with the cells of Pycnoporus sanguineus*

Malarvannan G, Poma G, Scudder ChJ, Niessen SJM, Covaci A: Organohalogenated chemicals and their association with acromegaly in humans

Wan WN, Huang HL, Han RX, Zhang SZ: Uptake, translocation, and biotransformation of organophosphorus esters in wheat (Triticum aestivum L.)

LEGACY AND EMERGING FLAME RETARDANTS III: IDENTIFICATION, NEW ANALYTICAL METHODS AND APPLICATION (S 30)

Verbal presentations

Drage DS, Sharkey M, Abdallah MA, Berresheim H, Harrad S: Is portable XRF a viable tool for testing compliance of waste articles with low POP concentration limits?

Sharkey M, Drage D S, Abdallah M A-E, Harrad S, Berresheim H: Suitability of portable *x*-ray fluorescence for the quantification of brominated flame retardants in waste – A large scale study in Ireland

McGrath TJ, Morrison PD, Ball AS, Clarke BO: Are Australian electronic waste recycling facilities contaminating surrounding soils with brominated flame retardants?

Ramungul N, Methacanon P, Songngam S, Jongthammanurak S, Boontongkong Y, Srikudvien P: *A preliminary study of flame retardants in WEEE plastics in Thailand*

Oluseyi T, Harrad S, Abdallah M, Calaprice Ch: Correlation of XRF measurements of chlorine with GCMS analysis of chlorinated organophosphate flame retardants in wastes

Wang S, Romanak K, Salamova A, Stubbings WA, Hendryx M, Arrandale VH, Diamond ML, Venier M: Validation of silicone wristbands as passive samplers for the assessment of exposure to flame retardants and polycyclic aromatic hydrocarbons

Cooper J, Parera J, Abad E, Law R, Cojocariu C: Identification and quantification of polybrominated diphenyl ethers (PBDEs) in environmental samples using gas chromatography coupled to orbitrap mass spectrometry

Zacs D, Perkons I, Bartkevics V: Applicability of gas chromatography coupled with atmospheric pressure chemical ionization Fourier transform ion cyclotron resonance mass spectrometry (GC-APCI-FTICR-MS) for the analysis of flame retardants in food

Poster presentations

Brazeau AL, Pena-Abaurrea M, Shen L, Riddell N, Reiner EJ, Lough AJ, McCrindle R, Chittim B: Dechlorinated analogues of Dechlorane Plus

Chan T-Ch, Yip Y-Ch: Determination of hexabromocyclododecane (HBCD) in PUF/filter samples by isotope dilution liquid chromatography– tandem mass spectrometry (LC–MS/MS)

Chibwe L, De Silva AO, Myers AL, Reiner EJ, Jobst K, Muir DCG: First steps towards characterization of polyhalogenated alkane (PXA) flame retardants

Crombie S, Moore S, Proulx S: Comparative methods for effective clean-up of flame retardants in sediments

Haraguchi K, Fujii Y, Ohta C, Koga N, Kimura O, Endo T, Kato Y: Human exposure to brominated phenoxy phenols: seaweeds as source of hydroxylated and methoxylated PBDEs in Asia-Pacific

Huang P, Li J, Shi Z, Tian L: Analysis of polybrominated diphenyl ethers and novel brominated flame retardants in human serum by QuEChERS pretreatment coupled to GC-APCI-MS/MS

Kubwabo C, Fan X, Katuri GP, Rasmussen PE: Determination of aryl and alkyl-aryl phosphates in house dust

Matsukami H, Suzuki G: In silico screening for bioaccumulative and bioavailable constituents in chlorinated organophosphorus oligomer flame retardant known as V6

Miyake Y, Tokumura M, Wang Q, Amagai T, Ogo S, Kume K, Kobayashi T, Takasu S, Ogawa K, Kannan K: Identification of novel phosphorus flame retardants in curtains using orbitrap mass spectrometry

Puype F: Identification of "heavy" and polymeric brominated flame retardants in polymeric consumer goods by reactive and non-reactive pyrolysis GC-MS: approach for primary identification

LEVELS IN HUMAN FOODS AND ANIMAL FEEDS (S 31)

Verbal presentations

Brambilla G, Ceci R, Abete MC, Binato G, Chessa G, Esposito M, Fedrizzi G, Ferrantelli V, Ferretti E, Menotta S, Miniero R, Nardelli V, Neri B, Piersanti A, Scortichini G, Ubaldi A, Diletti G: Suitability of $\Sigma 6$ ndl-PCB dataset from official food monitoring plans 2013-15 for dietary intake estimates in the Italian population

Warenik-Bany M, Pajurek M, Mikołajczyk S, Pietroń W, Piskorska-Pleszczyńska J: Dioxin and PCB levels comparison in farm and wild deer

Glushkina DM, Bulik S, Numata J, Schafft H, Lahrssen-Wiederholt M: Extending the 3R principle using PBPK modelling: A case study of TCDD transfer from feed to growing pigs

Han Y, Liu W: Sources of polychlorinated dibenzo-p-dioxins and dibenzofurans, and biphenyls in Chinese mitten crabs

Malisch R, Kraetschmer K, Schill S, Tschiggfrei K, Zwickel T, Schaechtele A: EU Reference Laboratory and National Reference Laboratories for halogenated POPs in feed and food

Maszewski S, Mikołajczyk S, Pajurek M, Pietroń W, Warenik-Bany M, Piskorska-Pleszczyńska J: Dioxin and PCB levels in milk of farm animals

Masuda M, Wang Q, Tokumura M, Miyake Y, Amagai T: Unintentional generation of chlorinated polycyclic aromatic hydrocarbons during cooking

Pajurek M, Pietroń W, Maszewski S, Mikołajczyk Sz, Piskorska-Pliszczyńska J: Poultry eggs as a source of PCDD/Fs, PCBs, PBDEs and PBDD/Fs

Poster presentations

Díaz-Ferrero J, Riba M, Moral A, Martí R: Levels of persistent organic pollutants (PCDD/Fs, PCBs, PBDEs and Dechloranes) in paprika

Hope K, Fiedler H, Pond P, Hope D: Polychlorinated biphenyls in major foodstuffs on the Canadian market

Kirankumar PS, Sanath K, Ajay SV, Prathish KP, Ajit H: *Quantification of dioxins and dioxin- like PCB levels in fish samples collected from Periyar River, India*

Law R, Calaprice C, Silcock P, Cojocariu C: Applying EU LOQ guidance for the low level quantification of PCDD/Fs in animal feed using a triple quadrupole GC-MS/MS system with an advanced EI source

Małagocki P, Furga B, Gembal M, Cebulska J, Milczarczyk E, Piskorska-Pliszczyńska J: Results of official control of dioxins and dl-PCBs in Polish feedstuffs

Mikołajczyk S., Maszewski S., Pajurek M., Pietroń, W., Warenik-Bany M., Piskorska-Pliszczyńska J: Dioxins and PCBs in ostrich eggs - unknown source of contamination

Mukai Y, Goto A, Tashiro Y, Tanabe S, Kunisue T: Coastal monitoring of organohalogen compounds using oysters from Okinawa island, Japan

Pajurek M, Mikołajczyk Sz, Maszewski S, Piskorska-Pliszczyńska J: Background levels of dioxins and PCBs in Polish feed materials, 2013 to 2017

Umnova NV, Turbabina KA, Levenkova ES, Roumak VS, Shelepchikov AA: PCDD/Fs in tissues of wild animals inhabiting sites outside the landfill near Moscow, Russia

MECHANISMS OF FORMATION AND DESTRUCTION OF HALOGENATED DIOXINS, PAHs, BIPHENYLS AND SIMILAR COMPOUNDS (S 32)

Verbal presentations

Franke V, Schäfers M, Lindberg JJ, Lakshmanan R, Ahrens L: Removal of per- and polyfluoroalkyl substances from drinking water using ozonation combined with a heterogeneous catalyst and persulfate

Kajiwara N, Matsukami H: Chlorinated paraffins in consumer products on the Japanese market and their destruction behavior during waste incineration

Lu H, Huang L, Li Q, Su G, Zheng M: Synthesis of metal oxide nanomaterials for the catalytic degradation of 1chloronaphthalene and 2-monochlorobiphenly

Solá-Gutiérrez C, San Román MF, Ortiz I: Dioxins and furans as by-products in the oxidation of Triclosan

Stec AA, Dickens KE: The fate of phosphorus flame retardants in fires

Xia K, Wang X, Ni Y, Zhang H, Zhang Y, Chen J: Precursors of PCDD/Fs during non-wood pulp chlorine bleaching process

Zhang H, Fan Y, Chen J: Levels and fingerprints of chlorinated aromatic hydrocarbons in flue gases and fly ashes from the typical industrial thermal processes: Implication for the mechanism of simultaneous formation

Zhang M, Fujimori T, Shiota K, Mukai K, Buekens A, Li X, Niwa Y, Takaoka M: XAFS investigation of chromium chloride catalysed formation of dioxins

Poster presentations

Fujimori T, Kojima Y, Takaoka M, Shiota K, Ina T, Niwa Y: Formation of chlorinated dioxins by open burning of cables: Reaction between copper and PVC

Herrera Mejía SL, Villa Holguín AL, Johnson BG: Hydrodechlorination of PCDD/Fs and dl-PCBs over molybdenum supported catalysts

Iñiguez ME, Soler A, Ortuño N, Conesa JA: Effect of sodium chloride and thiourea in the pollutant formation during combustion of plastics

Moreno AI, Font R, Conesa JA, Gómez-Rico MF: *Recent studies of inhibition of PCDD/F formation in thermal processes*

Yoneda T: *Chemical degradation of a substituted-chlorobenzene in an aqueous medium using palladium catalysts tethered by a hydrophobic organophosphonic acid*

NON-TARGET SCREENING - MULTIMEDIA ANALYSIS (S 33)

Verbal presentations

Aznar-Alemany Ò, Sala B, Jobst KJ, Reiner EJ, Borrell A, Aguilar À, Barceló D, Eljarrat E: Temporal trends of flame retardants and non-targeted analysis of halogenated contaminants in striped dolphins from the Mediterranean Sea

Cariou R, Léon A, Hutinet S, Guitton Y, Hurel J, Pourchet-Gellez M, Antignac JP, Munschy C, Tixier C, Dervilly-Pinel G, Le Bizec B: HaloSeeker v1.0, a user-friendly software application for screening halogenated chemicals from untargeted high resolution mass spectrometry data

Lee S, Kim K, Jeon J, Moon H-B: Prioritization of emerging contaminants in the Arctic environment using target and non-target screening analysis

Rostkowski P, Haglund P, Oswald P, Thomaidis N, Aalizadeh R, Covaci A, Moschet Ch, Karzenon S, Yang Ch, Shang D, Hindle R, Booij P, Ionas A, Grosse S, Arandes JB, Dévier MH, Lestremau F, Leonards P, Plassman M, Magner J, Matsukami H, Jobst K, Reid M: The value of complementary techniques in suspect and non-target screening – results of the Norman Collaborative Trial of the indoor dust

Yongfeng L, Ting R, Guibin J: Identification of ToxCast chemicals in airborne fine particulate matter by a suspect screening strategy

Wei S, Yu N: Non-target screening of organic pollutants in multimedia in China

Yu N, Guo H, Wei S: Non-target and suspect screening of per- and polyfluoroalkyl substances in airborne particulate matter in China

Hasegawa H, Nishino T, Tojo T, Matsumura C, Miyawaki T, Suzuki S: Screening of organic pollutants in environmental water in urban areas of Japan

Li Y, Yu N, Wei S: Non-target strategy of organic compounds in paired maternal and cord serum

Yukioka S, Tanaka S, Suzuki Y, Fujii S, Echigo S, Hayashi A: Suggestion on a procedure to identify nontargeted per – and polyfluoroalkyl substances (PFASs) based on fragmentation flagging by liquid chromatographyion mobility-quadrupole-time of flight mass spectrometry (LC/IM-QTOF)

Zhang XM, Jobst K, Helm P, Reiner EJ, Brindle I: Targeted and non-targeted screening of hydrophobic halogenated compounds in aquatic environment via passive sampling and GC-APCI-QToF-MS analysis: Potential application in water quality surveillance programs

Poster presentations

Hashimoto S, Matsukami H, Ieda T, Suzuki G: Comprehensive analysis of halogenated compounds in discharge water samples by GC×GC/ToFMS

Kato M, Nishino T, Shimoma S: Comprehensive analysis of organic compounds in the water environment in Tokyo by automated identification and quantification system with GC-MS database

Miyawaki T, Takahashi K, Nishino T, Hasegawa H, Tojo T, Matsumura C: Screening method of organic pollutants in river water of urban areas in Japan using a GC-MS database system

Qu GB, Liu AF, Qianchi M, Jianbo S, Guibin J: Transformation of TBBPA/S derivatives in soil samples

ORGANOMETALLIC CONTAMINANTS (S 34)

Verbal presentations

Tinant G, Neefs I, Rees J-F, Larondelle Y, Debier C: Is methylmercury a new candidate obesogen?

Eklund B: Is TBT occurrence on pleasure boats still a problem?

Huang Q, Yang L, Zhu Z, Qiu Y, Yin D, Zhao J, Bergman Å: Contamination of organotin compounds in public drinking water in Shanghai, China

Josefsson S, Apler A, Zillén L, Linderoth M: *Temporal and spatial trends of organic contaminants in Baltic Sea and Swedish west coast off-shore sediment*

Kuangwei H, Koji A, Yuka Y, Yasuhiro I: Substance flow analysis of mercury-containing by-product and estimation of mercury release from the industrial coal-fired boiler

Tinant G, Neefs I, Rees J-F, Larondelle Y, Debier C: Is methylmercury a new candidate obesogen?

Zhang J, Falandysz J, Wang YZ, Li T: Contamination of mushrooms from China with arsenic and arsenic compounds, a mini review

Poster presentations

Kroupová K, Kuta J, Maňoušek J, Adu-Kumi A: A fast and sensitive method for determination of methylmercury in human milk and blood using isotopic dilution HPLC-ICP-MS

Mędyk M, **Dryżałowska A**, **Wang Y-Z**, **Zhang J**: Effect of deep frying (with a wok pan) on level of mercury in *mushrooms*

Saba M, Wang Y-Z, Zhang J: Mercury contamination levels and distribution in sclerotia of Wolfiporia cocos (F.A. Wolf) Ryvarden & Gilb

PERSISTENT BIOCIDES AND PESTICIDES (S 35)

Verbal presentations

Guida YS, Meire RO, Silva EBV, Capella R, Lino AS, Carvalho DFP, Braga ALF, Torres JPM: Occurrence of atmospheric legacy and current-use pesticides in two highly impacted areas of Brazilian southeastern coast: How much pesticides can we breathe at sub/urban areas?

Wang S, Romanak K, Steiniche T, Wasserman M, Venier M: Occurrence of legacy pesticides, current use pesticides, and flame retardants in conservation areas

Lu XB, Fu L, Chen JP: Levels, distributions and human health risks of OCPs and PCBs in freshwater products

Mierzejewska E, Urbaniak M, Baran A, Tankiewicz M: The effect of the selected plant secondary metabolites on structurally related phenoxy herbicides (2,4-D and MCPA) removal rate, presence of bacterial degradative genes and samples phytotoxicity

Tojo T, Ichihara M, Asakawa D, Kakutani N, Miyamoto I, Ueda M, Matsumura C, Hasegawa H, Miyawaki T, Nishino T: Development of analytical methods for pesticides in ambient air: Comparison between target analysis and non-target analysis

Yadav IC, Watanabe H: Soil erosion and transport of Imidacloprid and Clothianidin in the upland field under simulated rainfall condition

Zhang N, Zhang H, Chen J: Bioaccumulation of organochlorine pesticides and polychlorinated biphenyls by the edible loaches and crabs living in rice paddy fields of Northeast China

Poster presentations

Fujita K, Sakai A, Kondoh Y, Honda K, Osada H, Inui H: Reduction of crop contamination resulting from hydrophobic contaminants by the treatment of pesticides targeting to its transport factors

Pełesz A, Wójtowicz AK: Triclocarban affects the estradiol secretion and causes both cytotoxic and apoptotic death in human placental choriocarcinoma JEG-3 cells

Sajwan KS, Loganathan B, Powell M, Patel B, Rawon C: Legacy organochlorine insecticides and biocides in sediments and fish samples from brackish and coastal waters off Savannah, Georgia, USA

POLYCHLORINATED NAPHTHALENES AND CHLORINATED PARAFFINS (PCNs/CPs) (S 36)

Verbal presentations

Yuan B, Benskin JP, Chen C-E, Bergman Å: A new analytical method for chlorinated paraffins using bromideanion attachment atmospheric pressure chemical ionization mass spectrometry

Meziere M, **Cariou R**, **Marchand P**, **Bichon E**, **Monteau F**, **Dervilly-Pinel G**: Adduct ions behaviour with respect to source parameters for the comprehensive LC-HRMS analysis of chlorinated paraffins (CPs)

Schinkel L, Bogdal C, McNeill K, Heeb N: *The CP/CO problem: Limitations of conventional GC-ECNI-MS when analyzing mixtures of chlorinated paraffins (CPs) and chlorinated olefins (COs)*

Leonards PEG, Koekkoek, J, Van Ginkel C: Analysis of medium chlorinated paraffins and closed bottle biodegradation tests

Sprengel J, Vetter W: Synthesis and characterization of C10-C17 chloroparaffins with single chain lengths and their use for quantification via GC/ECNI-MS-SIM

Brandsma SH, de Boer J, Leonards PEG: Chlorinated paraffins (C10-C31) in tire rubber granulates used on artificial-turf soccer fields

Cao D, Gao W, Wu J, Xin S, Wang Y, Jiang G: Occurrence of short- and medium-chain chlorinated paraffins in dust from plastic sports field and synthetic turf in Beijing, China

Kajiwara N, Matsukami H: Chlorinated paraffins in consumer products on the Japanese market and their destruction behavior during waste incineration

Guida Y, Meire RO, Sprengel J, Torres JPM, Vetter W: Short-chain chlorinated paraffins in air from southeastern Brazilian mountains

Li Z, Gong Y-Y, Holmes M, Pan X, Zou X, Shirima C, Kimanya M, Fernandes A: Geospatial visualisation of food contaminant distribution: polychlorinated naphthalenes (PCNs), polybrominated diphenylethers (PBDEs) and aflatoxins

Dat N-D, Huang Y-Ch, Wang W-Ch, Luy J-M, Chang M-B: *Characteristics of polychlorinated naphthalenes* (PCNs) associated with ambient-air particles and fly ash collected from existing APCDs in Taiwan

Dat N-D1, Lien Ch-G, Lyu J-M, Huang YJ, Wang WCh, Chang M-B: Reducing of polychlorinated naphthalenes (PCNs) emission from municipal waste incinerator

Falandysz J, Smith F, Fernandes A: Polychlorinated naphthalenes (PCNs) in cod liver oil and cod liver products sourced from the Baltic Sea and the North Atlantic Ocean

Huang H, Wang R, Gao L, Li J, Zhang L: Dietary exposure to short- and medium-chain chlorinated paraffins in meat and aquatic products from China

Krätschmer K, Schächtele A, Malisch R, Vetter W: Chlorinated paraffins (CPs) in salmon and trout: Occurrence levels, homologue patterns and relation to other persistent organic pollutants

Sprengel J, Wieselmann S, Vetter W: Chlorinated paraffins in dietary supplement oil capsules from the German market

Van Mourik LM, Wang X, Toms LML, Leonards PEG, de Boer J1, Mueller JF: Chlorinated paraffin levels in Australia: assessing spatial differences in ambient air and temporal trends in humans

Dumas P: *Quantification of polychlorinated paraffin (SCCPs, MCCPs) in human serum: A Complex analytical challenge*

Liu H, Gozhina O, Gorovoy A, Johansen JE: New standards of polychlorinated alkanes (SCCPs)

Poster presentations

Chang K-S, Wu Ch-P, Chen Y-W, Chi K-H, Dat N-D, Chang MB: Measurement of PCNs in sediment of a reservoir in northern Taiwan

Hanari N, Falandysz J, Yamazaki E, Yamashita N: Possibilities of field experimental photolysis of polychlorinated naphthalenes

Jiang W, Huang T, Ma J: *Chinese national gridded emission inventory and contamination of short-chain chlorinated paraffins to the biotic and abiotic environments in the Bohai Sea*

Krätschmer K, Schächtele A, Malisch R: Analysing chlorinated paraffins: Intermediate results after round one of the interlaboratory study

Labadie P, Goutte A, Maciejewski K, Simonnet-Laprade C, Le Menach K, Alliot F, Santos R, Budzinski H: Comparative trophodynamics of polychlorinated biphenyls and chlorinated paraffins in an urban river: case study on the River Orge (near Paris, France)

Moeckel C; Lunder Halvorsen H, Pedersen LS, Krogseth IS, Bohlin-Nizzetto P, Borgen AR, Schlabach M, Breivik K: Spatial distribution of short- and medium-chain chlorinated paraffins in European background air

Schinkel L, Knobloch M, Bogdal C, Lienemann P, McNeill K, Heeb N: Transformation of chlorinated paraffins to chlorinated olefins during metal drilling

Shin F-S, Choo G, Oh J-E, Chang Y-S: Monitoring of emerging POPs (Deca-BDE, PCNs, SCCPs) in fish and shellfish

POPs AND EMERGING CONTAMINANTS IN DEVELOPING COUNTRIES (S 37)

Verbal presentations

Birgul A, Yavuz-Guzel E, Daglioglu N, Kurt-Karakus PB: Determination of rainwater concentrations and wet deposition fluxes of the selected current-use pesticides (CUPs) in Bursa, Turkey

Kurt-Karakus P, Odabasi M, Birgul A, Yaman B, Gunel E, Dumanoglu Y: Environmental contamination by obsolete pesticide stockpiles in Turkey: Case study for Derince province

Pongpiachan S, Hattayanone M, Tipmanee D, Suttinun O: Chemical characterisation of polycyclic aromatic hydrocarbons in coastal areas of Thailand affected by the 2013 Rayong Oil Spill

Helou K, Karaki S, Harmouche Karaki M, Narbonne J-F: Review of available data on organochlorine pesticides and polychlorinated biphenyls residues in environment, food and humans in Lebanon

Gevao B, Porcelli M, Guijarro K, Rajagopalan S, Krishnan D, Bahloul M, Zafar J: Towards an understanding of short, medium, and long-term temporal trends in the atmospheric concentrations of persistent organic pollutants in Kuwait

Clarke E, Asante KA, Nortey Ch, Osei-Fosu P, Kyeremateng-Amoah E, Appoh EKE, Fletcher AA, Adu-Kumi S, Weber R: *Health and socio-economic assessment of persistent organic pollutants in vulnerable populations of Ghana*

Fiedler H, Sobhanei S, Yeung LWY: First results of PFOS monitoring in surface waters of three continents

Macías-Zamora JV, Quezada-Hernández C, Sánchez-Osorio JL, Ramírez-Álvarez N, Hernández-Guzmán FA: A first look at PBDEs and other POPs in commercial harvest of Mytilus sp. and Crassostrea gigas from the Pacific coast of Mexico

Tominaga MY, Niwa NA, Silva CR, Souza CAM, Sato MIZ: Stockholm Convention persistent organic pollutants monitoring activities in São Paulo State, Brazil

Torres JPM, Soares TAF, Guida YS, Vianna MS: Organochlorinated pesticides (OCPs; DDT and its metabolites) in soils from a small Native American (Guarani-Ñandeva - Tehoe Oco'y) territory near the Itaipu hydroelectric reservoir located at Paraná State, southern region of Brazil

Parente CET, Vollú RE, Carvalho GO, Azeredo A, Torres JPM, Meire RO, Seldin L, Malm O: *Fluoroquinolone degradation ratio in poultry litter fertilized soils and persistence of biological impacts below analytical limits of detection – a field study*

Poster presentations

Fatunsin OT, Ajani Z, Olayinka KO, Oyeyiola AO: Method development and risk assessment of acrylamide from commonly consumed fried foods from Southwestern Nigeria

Pozo K, Diaz X, Metzdorff A, Corral M, Oyola G, Pribylova P, Estellano VH, Klanova J: Occurrence of polychlorinated biphenyls (PCBs) in the Chilean atmosphere using passive air samplers PUF disk

Pozo K, Metzdorff A, Estellano VH, Martinik J, Pribylova P, Klanova J: Levels of persistent organic pollutants (POPs) in the industrial area of Las Higueras Talcahuano, in central Chile, using passive air sampler PUF disk

Ramírez-Álvarez N, Macías-Zamora JV, Sánchez-Osorio JL, Hernández-Guzmán FA, Álvarez-Aguilar A, Valenzuela-Suarez BJ, Mejía-Trejo A: PBDEs in sediments and geoduck clam (Panopea globosa) from the Protected Natural Area of the Upper Gulf of California and Colorado Delta River, Mexico

POPs AND EMERGING CONTAMINANTS IN URBAN ENVIRONMENT (S 38)

Verbal presentations

Hai Ch V, Anh MT: Assessment of characteristic distribution of PCDD/Fs in medical waste incinerators

Malikova KhT, Naghiyeva SV, Aliyev FV: Determination of persistent organic pollutants – PCDDs, PCDFs and dl-PCBs in river and sea fishes in Azerbaijan

Kim H-J, Kim H-J, Lee Ch-H, Kim J-H, Jeon J-W, Son J-Y, Choi S-D: Levels and characteristics of HBCD in the air and soil in Republic of Korea

Guardans R: A note on POPs in dated sediment cores from densely populated areas: global features in local histories and the future of air quality

Roscales JL, Muñoz-Arnanz J, Ros M, Vicente A, Jiménez B: PCDD/Fs, dl-PCBs and PBDEs in urban areas from Spain

Saini A, Jariyasopit N, Harner T, Dabek-Zlotorzynska E, Celo V, Halappanavar S, Wu D, Gaga E.O, Evans G: Assessing toxicity of organics in urban source sectors for air (ATOUSSA)

Coggan TL, Szabo D, Moodie D, Shimeta J, Crosbie ND, Fernandes M, Lee E, Clarke BO: Investigation of the levels of per- and polyfluoroalkyl substances (PFAS) in aqueous matrices from nineteen Australian WWTPs

Nguyen HT, Kaserzon SL, Thai PhK, Tscharke B, Gallen Ch, Mueller JF: Distribution and mass load of poly-/perfluoroalkyl substances in wastewater treatment plants across Australia

Poster presentations

Han H, Woo JS, Bae YS, Lee YK, Kim DG, Park IB, Kim YJ, Song I, Jeong B, Kim JS: Atmospheric concentration of PCDD/PCDFs using active and passive sampler in Gyeonngi-do, Korea from 2011 to 2016

Jia L, Deng Y, Mao W, Yin H, Tao F, Huang F: Levels of PCDD/Fs in soils in the vicinity of the municipal solid waste incinerator in Shanghai, China

Lee B-H, Choi T-S, Jeon Y-R, Cha Y-H: *Trends in national emissions of dioxins on a crematory in the Republic of Korea*

Kwon SY, Seo S-H, Chang Y-S: *Exposure assessment of perfluoroalkyl substances (PFASs) on the general population: 10-year trend and health effects*

De la Torre A, Barbas B, Sanz P, Navarro I, Artíñano B, Martínez MA: PCDD/Fs and PCBs in urban ambient air: gas-particle partitioning, size distribution and inhalation risk

De Vivo B, Qu Ch, Albanese S, Lima A, Hope D, Fortelli A: *The occurrence of OCPs, PCBs, and PAHs in the soil of Naples metropolitan area, southern Italy*

Roscales JL, Muñoz-Arnanz J, Ros M, Vicente A, Jiménez B: Does the number of field blanks influence reported air POP concentrations in monitoring programs based on PUF-PAS?

Styszko K, Skiba A, Samek L, Furman L, Zięba D, Kistler M, Kasper-Giebl A, Konduracka E: Polycyclic aromatic hydrocarbons and endocrine disrupting chemicals in ambient particles from southern Poland, and their potential health impact

Tikhonov G, Artaev V, Lebedev A: Multiple ionization modes in analysis of environmental samples using novel GCxGC-HR-TOFMS

Yoshiki R, Yamasaki T, Yamamoto K, Haga Y, Nakagoshi A, Fujimori K, Matsumura C: *Benzotriazole UV stabilizers in water and atmosphere environment of Hyogo Prefecture, Japan*

POPs IN POLAR, CIRCUMPOLAR AND ALPINE REGIONS (S 39)

Verbal presentations

Li YM, Hao YF, Wang P, Yang RQ, Zhang QH: *Air monitoring of PCBs, PBDEs and OCPs in Arctic and west-Antarctic atmosphere during 2011-2016: Observation from XAD-2 resin passive air sampling*

Hung H, Wong F, Yu Y, Jantunen L, Barresi E, Sverko E, Dryfhout-Clark H, Fellin P: Temporal trends of persistent organic pollutants and chemicals of emerging Arctic concern in Arctic air

Li Y-F, Macdonald RW, Hung H, Kallenborn R: *Historical budget of* β *-hexachlorocyclohexane* (β *-HCH) into the Arctic Ocean*

Hermanson MH, Garmash O, Isaksson E, Teixeira C, Muir DCG: History of polychlorinated biphenyl deposition to snow and Ice from the Lomonosovfonna Glacier, Svalbard

Yang R, Li Y, Zhang Q: Transport and deposition of persistent organic pollutants in the Southeast Tibetan *Plateau*

Pan SY, Yang YS, Lin CY, Wu, CP, Lin NH, Chi KH: PCDD/F measurement at high-altitude station in Eastern Asia: Evaluation of long-range transport and source apportionment of PCDD/Fs during the Southeast Asia biomass burning event in 2007-2016

Metzdorff A, Pozo K, Roscales JL, Jiménez B, Cerro E, Dachs J, Přibylová P, Galbán-Malagón C, Bergami E, Corsolini S: Novel brominated flame retardants (n-BFRs) in indoor dust from bases and vessel in Antarctica

Corsolini S, Pala N, Martellini T, Baroni D, Cincinelli A: PCBs and PBDEs in soil, sediment and moss community from ponds across Victoria Land, Antarctica

Dietz R, Eulaers I, Desforges JP, Sonne C, Letcher RJ: An assessment of the biological effects of organohalogen exposure in Arctic wildlife and fish

Muir DCG, Houde M, De Silva AE, Butt C, Kirk J, Spencer C, Williamson M: Comparison of trends of perfluoroalkyl substances (PFASs) in ringed seals and in ocean waters across the Canadian Arctic

Sun J, Bustnes JO, Bårdsen BJ, Covaci A, Dietz R, Helander B, Jaspers VLB, Malarvannan G, Sonne C, Thorup K, Tøttrup AP, Zubrod JP, Eens M, Eulaers I: Temporal trends of polychlorinated biphenyls in northern white-tailed eagle Haliaeetus albicilla populations

Balakrishna K, Vijayasarathy S, Praveenkumarreddy Y, Gopal Ch, Eaglesham G, Jiang H, Bhat K: *First report of pharmaceuticals and personal care products in the sea-ice of Larsemann Hills, Eastern Antarctica*

Poster presentations

Krogseth IS, Breivik K, Wania, F: *Development and evaluation of a bioaccumulation model for organic contaminants in European Arctic marine ecosystems*

Souza JS, Cunha LS, Costa ES, Torres JPM: Polychlorinated biphenyls and organochlorine pesticides in Feathers of Pygoscelis antarctica

Ademollo N, Corsolini S, Rauseo J, Casentini B, Amalfitano S, Zoppini A, Valsecchi S, Polesello S, Spataro F, Pescatore T, Patrolecco L: Dynamics of legacy and emerging pollutants in fjord ecosystems of the high Arctic: Svalbard (Norway) and NE Greenland

Aznar-Alemany Ò, Yang X, Alonso MB, Costa ES, Torres JPM, Malm O, Barceló D, Eljarrat E: Antarctic marine mammals as indicators of long-range transport of emerging pollutants

Cabrerizo A, Muir DCG, De Silva A, Lamoreux S, Lafreniere M: Influence of permafrost disturbances on temporal trends of perfluoroalkyl substances (PFASs) and brominated flame retardants (BFRs) in landlocked Arctic char from lakes in the Canadian High Arctic

Kang J-H, Hwang H, Hur SD, Lee S-J, Choi S-D, Baek J-H: Determination of fire smoke proxies in the Greenland snow due to long-range transportation from North America

Lee I-S, Choi S-K, Choi M, Kim J-B: Levels and compositions of Perfluorinated chemicals in muscle tissues of Antarctic toothfish (Dissostichus mawsoni)

Pouch A, Zaborska A, Pazdro K: Distribution of persistent organic pollutants in pelagic zone of the Arctic fjords

QAQC OF POPs ANALYSIS - RECENT ISO AND NATIONAL STANDARDS (S 40)

Verbal presentations

Archer JC, Moore M, Guo W, Bruce J, McLain M, Fairchild R, Hong H: Quality control algorithm for determining data acceptability

Esposito V, Bruno D, Maffei A, Giua R, Nicosia A, Ficocelli S: Validation of a PCDD/Fs long-term emission sampling system at a large sinter plant for assessment of compliance to permitted emission limit values

Horii Y, Takasuga T, Yamashita N, Miyazaki A: International standardization for determination of cyclic volatile methylsiloxanes in water

Liu H, Gozhina O, Gorovoy A, Midtaune H, Johansen JE: Development of PAH reference materials and internal standards

Ricci M , van Mourik LM, Lava R, de Boer J: Mission sccpossible: A perspective view on the certification of the first reference material for short-chain chlorinated paraffins

Prakash B, Byrne G, Ogura T: Determination of perfluorinated alkyl acids specified in EPA M537 and beyond in drinking waters using triple quadrupole LC/MS/MS systems

Taniyasu S, Reiner EJ, Riddell N, Yamazaki E, Yamashita N: Interlaboratory trial for validation of ISO 21675 for per- and polyfluoroalkyl substances (PFAS) in water

Yamashita N, Taniyasu S, Yamazaki E, Wang XH, Falandysz J: The international standard method for measuring per- and polyfluoroalkyl substances in ambient air

RISK ASSESSMENT AND RISK MANAGEMENT (S 41)

Verbal presentations

Wikoff D, Ring CL, Thompson C, Urban J, Budinsky RA, Haws LC: *Characterization of the dose-response relationship for TCDD and changes in sperm concentration in rats using meta-regression: A feasibility assessment of quantitative evidence integration techniques*

Kwon SY, Seo S-H, Chang Y-S: *Exposure assessment of perfluoroalkyl substances (PFASs) on the general population: 10-year trend and health effects*

Ohajinwa CM, van Bodegom P, Vijver M, Peijnenburg W: Estimation of health risk of polybrominated diphenyl ethers at informal electronic waste recycling sites

Ring CL, Wikoff D, Budinsky RA, Haws LC: *Bayesian approach to assessing uncertainty in dioxin reference dose*

Wikoff D, Ring CL, Thompson C, Harris M, Haws LC: *Continued refinement of relative potency (REP) estimates for dioxin-like compounds: Case study application of consistent methodologies to develop REP values*

Poster presentations

Fatunsin OT, Ajani Z, Olayinka KO, Oyeyiola AO: Method development and risk assessment of acrylamide from commonly consumed fried foods from southwestern Nigeria

Dong-Hee K, Woo-Seon S, Ji-Hee Hwang, Iwata H, Eun-Young K: Develop of in silico computational method for seeking the PPARy ligand

Kwon SY, Jeong Y, Shin E-S, Chang Y-S: *Quantitative assessment of risks and benefits of seafood consumption by the Korean population*

SAMPLING, PREPARATION AND DETERMINATION (S 42)

Verbal presentations

Archer JC, Gentry JM, Jenkins Jr. RG, Shojaee S: *Automated acid hydrolysis with abbreviated Soxhlet extraction for multiple matrices*

Cerasa M, Mosca S, Budonaro A, Paris E, Guerriero E, Rotatori M: Innovative fast SPE for the extraction of PCDD/Fs and dl-PCBs in aqueous samples – preliminary assessment

Drage DS, Sharkey M, Abdallah MA, Berresheim H, Harrad S: *Is portable XRF a viable tool for testing compliance of waste articles with low POP concentration limits?*

Schlabach M, Fiedler D, Myhre G, Gruber L, Vik AF, Schlummer M: Unequivocal determination of fluorine on the surface of cross country skis prepared for competition by WD-XRF

Yeung LWY, van Hees P, Karlsson P, Söderlund L, Filipovic M: Total fluorine, extractable organofluorine, per/polyfluoroalkyl substances and total oxidizable precursor assay on contaminated soil

Addink R, Shirkhan H, Hall T, Germansderfer P: Fully automated, one step acid digestion, clean up and fractionation of POPs in fatty samples using modular and expendable columns packaged

Germansderfer P, Addink R, Hall T, Shirkhan H: Analysis of perfluorinated compounds in waste water using automated solid phase extraction

Hsu Y-Ch, Chang S-H, Chang M-B: Development of a continuous sampling system for POPs measurement

Huber S, Averina M, Box J: *An automated high through-put sample preparation method for analysis of legacy POPs in human serum and plasma by atmospheric pressure GC-MS/MS*

Jílková S, Melymuk L, Vojta Š, Vykoukalová M; Bohlin-Nizzeto P, Klánová J: Small-scale spatial variability of flame retardants in indoor dust and implications for dust sampling

Kerkemeier T, Henkelmann B: *Highly viscoid matrices like PFAD or stearin in dioxin/PCB cleanup systems – viewpoint of the quality assurance*

Poster presentations

Cerasa M, Mosca S, Budonaro A, Guerriero E, Rotatori M, Bacaloni A: Preliminary validation studies on ACF passive sampler for PCDD/Fs and PCBs in water

Chen S, Li XX, Feng F, Li SM: *Highly efficient HPLC separation of xylene isomers and phthalate acid esters on a homemade DUT-67(Zr) packed column*

Jilková S, Melymuk L, Klánová J: Using HVAC filters as a sampler for indoor and outdoor air

Hall T, Germansderfer P, Addink R, Shirkhan H: Analysis of base, neutral and acid semi-volatiles in municipal and industrial waste water by automated solid phase extraction

Puype F, Guzzonato A, Harrad S: Interpretation of principal component analysis for the evaluation of presence of WEEE-derived material in polymer based consumer goods

Li SM, Chen S, Zhang XL, Feng F: Application of metal-organic frameworks in solid phase extraction of persistent organic pollutants: A review

Sorokin AV, Ovcharenko VV, Turbabina KA, Kozhushkevich AI, Kalantaenko AM, Komarov AA: *Extraction and clean-up of PFC from fish tissue with UPLC/Q-TOF-MS detection*

Tsutsumi T, Kawashima A, Hamada N, Adachi R, Akiyama H: *Performance of a polychlorinated biphenyl clean-up system followed by gas chromatography tandem mass spectrometry for determining polychlorinated biphenyls in fish and shellfish*

SOURCES, FATE, TRANSPORT, MODELLING AND INVENTORIES (S 43)

Verbal presentations

Fiedler H, Malisch R, Schächtele A, Hoogenboom R, van Leeuwen S, Stephanowitz R, Knetsch G: *Pattern database for identification of sources and transfers of polychlorinated dibenzo-p-dioxins, dibenzofurans and biphenyls*

Yang YH, Ngo TH, Pan SY, Wu CP, Tsai HT, Chi KH: Continuous nationwide PCDD/F air monitoring network in Taiwan (2006-2017): concentration variation, emission source apportionment and exposure risk assessment

Hogarh JN, Bempah CK, Adu-Kumi S, Weber R: *Inventory of polybrominated diphenyl ethers (PBDEs) in the transport sector in Ghana*

Josefsson S, Norrlin N, Apler A, Gottby L, Larsson O, Nyberg J, Zillén L: *Fibrous sediment from pulp & paper mills – contamination levels and spatial extent*

Karunaratne DGGP, Welmillage SU, Jinadasa KBSN, Jayatilake A, Werahera SM, Weber R: *National inventory of unintentional persistent organic pollutants, polycyclic aromatic hydrocarbons, short lived climate pollutants, and BTEX for Sri Lanka*

Li Y-F: Prediction of slopes and intercepts from log-log correlations of gas/particle quotient and vapor-pressure & octanol-air partition coefficient for SVOCs

Ni KT, Suhlaing Ch, Weber R: Development of the first HBCD inventory in Myanmar

Rauert C, Harner T: Progress in tracking legacy and emerging POPs in the global atmosphere under the GAPS network

Poster presentations

Deng YY, Jia LJ, Mao WL, Yin HW, Tao F, Huang F: *Atmospheric bulk deposition of polychlorinated dibenzop-dioxins and dibenzofurans (PCDD/Fs) in the vicinity of MSWI in Shanghai, China*

Mansouri E, Alamir B, Reggabi M: Inventory status of dioxins/ furans in Algeria

Monti C, Monti A: A comparison of PCDD/F fingerprints in ambient urban air of big cities: a continental and economic effect?

Pandelova M, Bussian BM, Henkelmann B, Schramm K.-W: PBDE levels in German forest soils

Pinas VA, Weber R: Suriname inventory of PFOS & related substances "The beauty and dirty beasts"

Solá-Gutiérrez C, San Román MF, Ortiz I: Aqueous oxidation of Triclosan: the potential formation of *PCDD/Fs*

STRATEGY FOR A NON-TOXIC ENVIRONMENT: ADDRESSING PERSISTENCE (S 44)

Verbal presentations

Fantke P, Jolliet O, Overcash M: Introducing the sustainability perspective in chemical substitution

AlAfghani MM, Paramita D: Regulatory challenges in the phasing-out of persistent organic pollutants in Indonesia

Weber R, Mahjoub B, Ben Hamouda A, de Miguel Wardle K, Outters M, Fantke P: *Substituting hazardous chemicals in the Mediterranean region – Challenges and opportunities for safer and more sustainable solutions*

Ren Z: Environmental regulations of chlorinated aromatics from chemical manufacturing industries and inventory researches in China

Straková J, Petrlík J, Pulkrabová J, Gramblička T: *Toxic recycling, or how unsorted waste may contaminate consumer products in the Czech Republic*

Nnorom I.C, Odeyingbo O, Dubzer O: Concern over environmental POPs contamination from open burning of electronic wastes in Nigeria: lessons from the Person in Port Project

Drage DS, Sharkey M, Abdallah MA, Berresheim H, Harrad S: *Is portable XRF a viable tool for testing compliance of waste articles with low pop concentration limits?*

Petrlik J, Bell L, Behnisch PA, Wangkiat A: *High levels of PCDD/Fs around sites with waste containing POPs demonstrate the need to review current standards*

Poster presentations

Arkenbout A, Sarolea HA: Temperatures of post-combustion zone in a Waste-to-Energy incinerator

Bouman KJAM, Arkenbout A: *Waste incineration emissions of dl-PCB, PBB, PBDD/F, PBDE, PFOS, PFOA and PAH*