

## Dr Florence PORTET-KOLTALO

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## CURRICULUM VITAE

Researcher Teacher  
Normandy University – Rouen (France)

*Environment and analytical chemistry*

### EDUCATION

**Jan 2011** : HDR: Habilitation thesis to supervise research – University of Rouen, France  
Thesis: “*Separation Sciences and Environment*”.

**Oct 1992-sept 1996**: **PhD** – University Pierre et Marie Curie (UPMC), Paris, France  
Thesis : « *Study of the adsorption of complex formulations of nonionic surfactants at liquid/solid interfaces by high performance liquid chromatography.* »  
LASOC laboratory (Evreux, France). Dir.: Pr P.L. Desbène

**Oct 1991-Jul 1992** : Master degree « Spectroscopy, organic and biological analyses », University Pierre et Marie Curie (UPMC), Paris, France  
Thesis : “ *Complexation of metal cations by polyethyleneoxide surfactants. Application to the analysis on nonionic surfactants by exchange ion chromatography.* ”  
LASOC laboratory (Evreux, France). Dir.: Pr P.L. Desbène

### RESEARCH EXPERIENCE

**Jan 2011-2015** : Associate Professor – University of Rouen, France – COBRA laboratory, UMR CNRS 6014. Dir: Pr X. Panecoucke.

**Projects 2015-2017**: “*Evolution of the toxicity of dredged sediments (containing mixed pollutants PAHs, PCBs, heavy metals) decontaminated by an electrokinetic process.* » Upper-Normandy Region funding, multi-disciplinary research network SCALE, SEDEVAR research project.

“ *Persistent organic and inorganic contaminants in fluvial sediment cores: quantification and bioavailability evolution for 80 years accumulation.* ” Upper-Normandy Region funding, multi-disciplinary research network SCALE, TYRECS research project.

**Projects 2012-2014**: “ *Study of contaminant evolution (PAHs, heavy metals) in water/soil/plant systems. Case of LID (Low Impact Development) urban roadways constructions.* ” Funding from INFRA-SERVICES society, Canteleu, France.

“ *Influence of bio- geo-chemical factors and biosurfactant addition on PAH bioavailability and biodegradation in diffusively contaminated soils.* ” Upper-Normandy Region funding, research network SCALE, RESSOLV research project.

**Project 2012**: “*Analysis of hydroxylated metabolites of PAHs in soils using molecularly imprinted polymers.*” Partnership with GTS research group of University of Barcelona (Spain) and Polyintell society (Val de Reuil, France).

**Sept 1997-dec 2010**: Associate Professor – University of Rouen, France – LASOC laboratory EA3233. Dir: Pr P.L. Desbène.

**Projects 2009-2012**: “ *Study of electrokinetic remediation process applied to dredged sediment cleanup.* ” Upper-Normandy Region funding, research network SCALE, RESSOLV project.

*“ Production and purification of cyclolipopeptidic biosurfactants for environmental use (desorption of lipophilic organic compounds from soils or sediment).”* Upper-Normandy Region funding, research network SCALE, RESSOLV project.

**Project 2008:** *“Study of the potentialities of a laser induced native fluorescence detector for capillary electrophoresis and nano-LC.”* Partnership with Flowgene Society (St Beuzire, France).

**Project 2002-2008:** *“ Optimisation of sample preparation and analytical tools for the analysis of PAHs and nitrated derivatives sorbed on Diesel soot.”* TOPAASE research program (Toxicology of Atmospheric Pollutants - Aerothermochemistry, Health, Environment), French government-Region contract plan, partnership with the CERTAM (Centre for Study and Technological Research in Aerothermics and Engines), Le Madrillet, France.

**Project 2001-2002:** *“Collect in aqueous phase of COVs present at trace level in an air stream and quantification by SPE-HPLC.”* CRAFT European research program (*“Depollution of COVs from gaseous releases”*); Partnership with the CERTAM, Le Madrillet, France.

**Project 1998-2001:** *“ Mixtures of nonionic and ionic surfactants at water/solid interfaces: competitive or synergistic sorption phenomena.”* French government-Upper-Normandy Region contract plan.

**Oct 1995- Sept 1996:** Temporary lecturer and research assistant - University of Rouen, France.

**Project:** *“Solid Phase Extraction (SPE) for simultaneous trace analysis of anionic and nonionic surfactants in water.”* French government-Region contract plan, partnership with the soap and detergent industry's association.

**Oct 1992- Sept 1995:** Doctoral research fellow (Research grant from the French Ministry of Education and Research).

**Project:** *“Analysis of traces of laundry surfactants in water”.* French government-Region contract plan, partnership with the soap and detergent industry's association.

**Sub-project (6 months):** *“Isolation of pure polyethyleneoxide surfactant oligomers by preparative liquid chromatography.”* Partnership with Janssen-Cilag pharmaceutical society.

#### **Thesis supervision:**

Supervision of 4 doctoral thesis, defended in 2006, 2013, two in 2015, and 2 others in progress

Supervision of 4 Master 2 degree thesis, defended in 2000, 2002, 2006, 2007.

#### **Projects coordination:**

Coordination of the regional SEDEVAR project (Contaminated Sediments: decontamination, Valorization or reuse for Ecological Restoration) (2014-2015), pooling the expertise of 5 research teams of Universities of Rouen and Le Havre (France).

Coordination of the regional RESSOLV project (Restoration of Vulnerable Sediments and Soils) (2010-2013), pooling the expertise of 4 research teams of Universities of Rouen and Le Havre (France).

#### **Reviewer:**

Talanta, J. Chrom. A, Analytica Chimica Acta...

J. Hazard. Mater., STOTEN, Pedosphere, Chemosphere, Env. Sci. technol., Env. Sci. Pollut. Res...

### **TECHNICAL SKILLS**

Liquid chromatography (HPLC, nanoLC), gas chromatography/mass spectrometry. Sample preparation: trace enrichment (solid phase extraction), extractions from environmental matrix (hot soxhlet, microwave-assisted extraction, pressurized liquid extraction, supercritical fluid extraction). Spectroscopy (UV, IR, fluorimetry). Experimental designs.

### **TEACHING EXPERIENCE**

Teaching at Licence degree at University Institute of Technology IUT of Evreux (France) since 1994, in various fields of chemistry, for students or professionals (permanent formation):

Thermodynamics, atomistic, polymers, crystallography, analytical chemistry, spectroscopy (UV, IR, Mass Spectrometry, RMN), chromatography, environment chemistry...

6 years educational support of the "Measurement Physics" department of IUT of Evreux.

## PUBLICATIONS

**Total articles: 34** of which 29 International articles

For publications, see my research ID: <http://www.researcherid.com/rid/H-8793-2015>

my ORCID number: <https://orcid.org/orcid.org/0000-0001-8665-1856>

my research gate: [http://www.researchgate.net/profile/Florence\\_Portet-Koltalo](http://www.researchgate.net/profile/Florence_Portet-Koltalo)

9 international and 18 French oral communications; 20 international and 24 French poster communications.

N° DOI	AUTHOR	TITLE	JOURNAL	IF
10.1007/BF02263883	B. Desmazières, F. Portet, P.L. Desbène	Analytical study of highly condensed nonionic surfactants. Separation on cation exchangers	<i>Chromatographia</i> , 1993, 36, 307-317	1.37
10.1016/0021-9673(95)01087-4	P.L. Desbène, F. Portet, G.J. Goussot	Quantitative trace analysis of surfactant mixtures by reversed-phase high-performance liquid chromatography with refractometric detection	<i>Journal of Chromatography A</i> , 730, 1996, 209-218	4.26
10.1006/jcis.1996.0614	F. Portet, P.L. Desbène, C. Treiner	Nonideality of mixtures of pure non-ionic surfactants both in solution and at silica/water interfaces	<i>Journal of Colloid and Interface Science</i> , 184, 1996, 216-226	3.55
10.1006/jcis.1997.4884	P.L. Desbène, F. Portet, C. Treiner	Adsorption of pure non-ionic alkylethoxylated surfactants down to low concentrations at silica/water interface as determined using a HPLC technique	<i>Journal of Colloid and Interface Science</i> , 1997, 190, 350-356	3.55
10.1006/jcis.1997.5113	F. Portet, P.L. Desbène, C. Treiner	Adsorption isotherms at a silica/water interface of the oligomers of polydispersed non-ionic surfactants of the alkylpolyethoxylated series	<i>Journal of Colloid and Interface Science</i> , 1997, 194, 379-391	3.55
10.1006/jcis.1998.5851	F. Portet, P.L. Desbène, C. Treiner	Polydispersity of non-ionic surfactants as related to their adsorption characteristics on porous silica particles in water	<i>Journal of Colloid and Interface Science</i> , 1998, 208, 415-421	3.55
10.1016/S0021-9673(00)00225-9	F. Portet, C. Treiner, P.L. Desbène	Simultaneous quantitative trace analysis of anionic and non-ionic surfactants mixtures by reversed-phase liquid chromatography	<i>Journal of Chromatography A</i> , 2000, 878, 99-113	4.26
10.1021/la001785p	F. Portet-Koltalo, P.L. Desbène, C. Treiner	Self-desorption of mixtures of anionic and non-ionic surfactants from a silica/water interface	<i>Langmuir</i> , 17, 2001, 3858-3862	4.38
10.1016/S0021-9797(03)00050-X	F. Portet-Koltalo, P.L. Desbène, C. Treiner	Analytical investigation of the self desorption of the oligomers of mixtures of a polydispersed ethoxylated surfactant with sodium dodecylsulfate from a silica/water interface	<i>Journal of Colloid and Interface Science</i> , 2003, 261, 40-48	3.55
10.1016/j.talanta.2006.06.043	F. Portet-Koltalo, K. Oukebdane, L. Robin, F. Dionnet, P.L. Desbène	Quantification of volatile PAHs present at trace levels in air-flow by aqueous trapping-SPE and HPLC analysis with fluorimetric detection	<i>Talanta</i> , 2007, 71, 1825-1833	3.50
	F. Portet-Koltalo, K. Oukebdane, F. Dionnet, P.L. Desbène	De l'intérêt de l'utilisation de la pyridine pour l'extraction par micro-ondes des hydrocarbures aromatiques polycycliques à partir des particules de suies émises à l'échappement d'un moteur Diesel	<i>Spectra Analyse</i> , 2007, 254, 28-36	

10.1007/s00216-007-1684-2	F. Portet-Koltalo, K. Oukebdane, F. Dionnet, P.L. Desbène	Optimisation of the extraction of polycyclic aromatic hydrocarbons and their nitrated derivatives from Diesel particulate matter using microwave-assisted extraction	<i>Analytical and Bioanalytical Chemistry</i> , 2008, 390, 389-398	3.66
10.1002/pssc.200881098	E. Méry, S. Alekseev, F. Koltalo, C. Morin, D. Barbier, V. Zaitsev, P. L. Desbène	Porous silicon based microdevice for reversed phase liquid chromatography.	<i>Physica Status Solidi C</i> , Special Issue: 6th PSST 2008, 2009, 6, 1777-1781	
10.1016/j.aca.2009.07.038	F. Portet-Koltalo, K. Oukebdane, F. Dionnet, P.L. Desbène	Optimisation of supercritical fluid extraction of polycyclic aromatic hydrocarbons and their nitrated derivatives adsorbed on highly sorptive diesel particulate matter	<i>Analytica Chimica Acta</i> , 2009, 651, 48-56	4.31
10.1016/j.talanta.2010.04.027	Oukebdane, K.; Portet-Koltalo, F.; Machour, N.; Dionnet, F.; Desbène, P.L.	Comparison of hot Soxhlet and accelerated solvent extractions with microwave and supercritical fluid extractions for the determination of polycyclic aromatic hydrocarbons and nitrated derivatives strongly adsorbed on soot collected inside a diesel particulate filter	<i>Talanta</i> 2010, 82, 227-236	3.49
10.1111/j.1574-6941.2009.00788.x	Niepceron, M.; Portet-Koltalo, F.; Motelay-Massei, A.; Barray, S.; Bodilis, J.	Both <i>Cycloclasticus</i> spp. and <i>Pseudomonas</i> spp. as PAH-degrading bacteria in the Seine estuary (France)	<i>FEMS Microbiol. Ecol.</i> 2010, 71, 137-147	3.56
	Portet-Koltalo, F.; Ammami, M.T.; Benamar, A.; Duclairoir-Poc, C.; Groboillot, A.; Orange, N.	Pollution des sédiments de dragage - Procédés de bioremédiation alliés à l'électromigration	<i>Spectra Analyse</i> 2010, 277, 54-58	
<a href="#">10.3390/ijms12031787</a>	Groboillot, A.; Portet-Koltalo, F.; Le Derf, F.; Feuilloley, M.J.G.; Orange, N.; Poc, C.D.	Novel Application of Cyclolipopeptide Amphisin: Feasibility Study as Additive to Remediate Polycyclic Aromatic Hydrocarbon (PAH) Contaminated Sediments	<i>Int. J. mol. Sci.</i> 2011, 12, 1787-1806	2.46
10.1016/j.chroma.2010.12.074	Portet-Koltalo, F.; Preterre, D.; Dionnet, F.	A new analytical methodology for a fast evaluation of semi-volatile polycyclic aromatic hydrocarbons in the vapor phase downstream of a diesel engine particulate filter	<i>J. Chromatogr. A</i> , 2011, 1218, 981-989	4.61
	Portet-Koltalo, F.; Ammami, M.T.; Benamar, A.; Groboillot, A.; Orange, N.; Duclairoir-Poc, C.;	Déséquestration de polluants de type hydrocarbures aromatiques polycycliques à l'interface de sédiments au moyen d'un tensioactif original d'origine biologique	<i>Spectra Analyse</i> 2011, 278, 21-27	
	Vieillard, J.; Morin, C.; Portet-Koltalo, F.; Le Derf, F.	Potentialités de la détection par fluorescence native induite par laser UV pour les sciences séparatives	<i>Spectra Analyse</i> 2011, 281, 20-27	
ISBN 979-953-307-1017-7	Portet-Koltalo, F.; Machour, N.	Analytical methodologies for the control of particle-phase polycyclic aromatic compounds from diesel engine exhausts	Diesel Engine, ed. S. Bari, INTECH Open Science, 2012	
10.1039/C3AY41227J	Baltrons, O.; López-Mesas, M.; Palet, C.; Le Derf, F.; Portet-Koltalo, F.;	Molecularly imprinted polymer-liquid chromatography/fluorescence for the selective clean-up of hydroxylated polycyclic aromatic hydrocarbons in soils	<i>Anal. Methods</i> , 2013, 5, 6297-6305	1.94
10.1016/j.jhazmat.2013.07.062	Portet-Koltalo, F.; Ammami, M.T.; Benamar, A.; Wang, H.; Le Derf, F.; Duclairoir-Poc, C.;	Investigation of the release of PAHs from artificially contaminated sediments using cyclolipopeptidic biosurfactants.	<i>J. Hazard. Mater.</i> 2013, 261, 593-601.	4.33
10.1051/e3sconf/20130101004	Ammami, M. T.; Benamar, A.; Koltalo, F.; Wang, H.Q.; Le Derf, F.	Heavy metals removal from dredged sediments using electro kinetics	E3S Web of Conferences, Proceedings, 16th International Conference on Heavy Metals in the Environment, EDP Sciences, 1, 2013,	

10.1016/j.envpol.2013.05.040	Niepceron, M.; Martin-Laurent, F.; Crampon, M.; Portet-Koltalo, F.; Akpa-Vinceslas, M.; Legras, M.; Bru, D.; Bureau, F.; Bodilis, J.;	GammaProteobacteria as a potential bioindicator of a multiple contamination by polycyclic aromatic hydrocarbons (PAHs) in agricultural soils.	<i>Environ. Pollut.</i> 2013, 180, 199-205.	3.73
10.1007/s13762-013-0395-9	Ammami, M.T.; Benamar, A.; Wang, H.; Bailleul, C.; Legras, M.; Le Derf, F.; Portet-Koltalo, F.;	Simultaneous electrokinetic removal of polycyclic aromatic hydrocarbons and heavy metals from an aged contaminated model sediment using mixed enhancing agents.	<i>Int. J. Environ. Sci. Te.</i> 2014, 11, 1801-1816,	1.84
10.1007/s11356-013-2258-9	Niepceron M.; Beguet J.; Portet-Koltalo F.; Martin-Laurent F.; Quillet L.; Bodilis J.	Low impact of phenanthrene dissipation on the bacterial community in grassland soil.	<i>Environ.Sci. Poll. Res.</i> 2014, 21, 2977-2987	2.76
10.1007/s11356-014-2799-6	Crampon, M.; Bureau, F.; Akpa-Vinceslas, M; Bodilis, J.; Machour, N.; Le Derf, F.; Portet-Koltalo, F.	Correlations between PAH bioavailability, degrading bacteria and soil characteristics during PAH biodegradation in five diffusely contaminated dissimilar soils	<i>Environ. Sci. Poll. Res.</i> 2014, 21, 8133-8145	2.76
10.1016/j.chemosphere.2014.03.012	Marcotte, S.; Poisson, T.; Portet-Koltalo, F.; Aubrays, M.; Basle, J.; de Bort, M.; Giraud, M.; Nguyen Hoang, T.; Octau, C.; Pasquereau, J.; Blondeel, C.	Evaluation of the PAH and water-extractable phenols content in used cross ties from the French rail network	<i>Chemosphere</i> 2014, 111, 1–6.	3.50
10.1007/s11356-014-3064-8	Crampon, M.; Copard, Y.; Favreau, G.; Raux, J.; Merlet-Machour, N.; Le Coz, M.; Ibrahim, M.; Peulon-Agasse, V.; Portet-Koltalo, F.	Occurrence of 1,1'-dimethyl-4,4'-bipyridinium (Paraquat) in irrigated soil of the Lake Chad Basin, Niger.,	<i>Environ. Sci. Poll. Res.</i> 2014	2.76
	M.C. Leroy, S. Marcotte, F. Le Derf, V. Moncond'huy, M. Legras, S. Marcotte	Infrastructures vertes : des outils paysagers et écologiques. Exemple des noues de voirie pour la remédiation des hydrocarbures aromatiques polycycliques (HAP) et des éléments traces (ET)	<i>Actual. Chimique</i> 2014, 390, 82-84	0.09
10.1016/j.chemosphere.2014.12.087	M.T. Ammami, F. Portet-Koltalo, A. Benamar, C. Duclair-Poc, H. Wang, F. Le Derf.	Application of biosurfactants and a periodic voltage gradient for enhanced electrokinetic remediation of metals and PAHs in dredged marine sediments.	<i>Chemosphere</i> , 2015, 125, 1-8	3.50
10.1016/j.scitotenv.2015.03.020	M.C. Leroy, M. Legras, S. Marcotte, V. Moncond'huy, N. Machour, F. Le Derf, F. Portet-Koltalo,	Assessment of PAH dissipation processes in large-scale outdoor mesocosms simulating vegetated road-side swales	<i>Science of the Total Environment</i> , 2015, 520, 146-153	3.16