Dr Mohammed Baalousha PhD

Research Fellow

School of Geography, Earth and Environmental Sciences (/schools/gees/index.aspx)

Contact details

Telephone +44 (0)121 414 5898 (tel:+44 121 414 5898)

Email m.a.baalousha@bham.ac.uk (mailto:m.a.baalousha@bham.ac.uk)

School of Geography, Earth and Environmental Sciences
University of Birmingham
Edgbaston
Birmingham
B15 2TT
UK

Qualifications

- 2006 - PhD Environmental Biogeochemistry “environmental role of colloids as carriers of trace elements” - University Bordeaux 1, France
- 2002 - Applied Mechanics - University Bordeaux 1, France
- 2001 - BSc Civil Engineering - Islamic University of Gaza, Palestine

Biography

Dr Mohammed Baalousha obtained a BSc in Civil Engineering from the Islamic University of Gaza, Palestine in 2001. After that, he moved to France where he completed a master degree in Applied Mechanics from the University Bordeaux 1 in 2002 and a PhD in Environmental Biogeochemistry “environmental role of colloids as carriers of trace elements” in 2006. Then, he moved to the United Kingdom, where he has taken a research fellow work at the University of Birmingham in the area of the environmental nanoscience.

Research

Research group

- **Environmental Health Sciences (/research/activity/environmental-health/index.aspx)**

Research interests

- Understanding the relationship between the structural and physicochemical properties of nanoparticles and their effects on environment and human health
- Understanding the environmental fate and behaviour of natural and manufactured nanoparticles
- Characterisation of the structural and physicochemical properties of natural and manufactured nanoparticles

Publications

Key Publications since 2005

Peer-reviewed international journals

Baalousha M, Le Coustumer P, Jones I, and Lead J.R. Characterization of structural and surface speciation of representative commercially available cerium oxide nanoparticles. Environ. Chem. 7 (2010) 377-385.

Johnston B D, Scown T M, Moger J, Cumberland S, **Baalousha M**, Linge K, van Aerle R, Jarvis K, Lead J R and Tyler C R. Limited bioavailability of nanoscale metal oxides, TiO2, CeO2, and ZnO to fish. Environ.Sci.Technol. 44 (2010) 1144-1151.

Scown T M, Santos E, Johnston B D, Gaiser B, **Baalousha M,** Mitov S, Lead J R, Stone V, Fernandes T, Jepson M, van Aerle R, and Tyler C R. Effects of Aqueous Exposure to Silver Nanoparticles of Different Sizes in Rainbow Trout. Toxicol. Sci. 115 (2010) 521-534

Scown T M, Goodhead R, Johnston B D, Moger J, **Baalousha M**, Lead J R, van Aerle R, Iguchi T and Tyler C R. Assessment of cultured fish hepatocytes for studying cellular uptake and (eco)toxicity of nanoparticles. Environ. Chem. 7 (2010) 36-49.

Rogers N J, Franklin N M, Apte S C, Batley G E, Lead J R and **Baalousha M**. Physico-chemical behaviour and toxicity to algae of nanoparticulate CeO2 in freshwater. Environ.Chem. 7 (2010) 50-60.

Hartmann N B, Von der Kammer F, **Baalousha M**, Ottofuelling S, Baun A. Algal testing of titanium dioxide nanoparticles – testing considerations, inhibitory effects and modification of cadmium bioavailability. Toxicol. 269 (2010) 190-197.

Hartland A, Fairchild I F, Lead J R, Dominguez-Villar D, Baker A, Gunn J, **Baalousha M**, Ju-Nam Y. The dripwaters and speleothems of Poole’s Cavern: a review of recent and ongoing research. Cave Karst Sci. 36 (2010) 37-46

Baalousha M. Aggregation and disaggregation of iron oxide nanoparticles; influence of particles concentration, pH and natural organic matter. Sci.Tot.Environ. 407 (2009) 2093-2101.

Batchelli S, Muller F L L, **Baalousha M**, Lead J R. Size fractionation and optical properties of colloids in an organic-rich estuary (Thurso, UK). Marine Chem. 113 (2009) 227-237.

Domingos R F, **Baalousha M**, Ju-Nam Y, Reid M, Tufenkji N, Lead J R, Leppard G G and Wilkinson K J. Characterizing manufactured nanoparticles in the environment-multimethod determination of particle sizes. Environ.Sci.Technol. 43 (2009) 7277-7284.

Baalousha M, Manciulea A, Cumberland S, Kendall K and Lead J R. Aggregation and surface properties of iron oxide nanoparticles; influence of pH and natural organic matter. Environ. Toxicol. Chem. 27 (2008) 1875-1882.

Christian P. von der Kammer F, **Baalousha M** and Hofmann Th. Nanoparticles: preparation, properties and behaviour in environmental media. Environ.Toxicol.Chem. 17 (2008) 326-343.

Baalousha M and Lead J R. Characterization of natural aquatic colloids (< 5 nm) by flow field flow fractionation and atomic force microscopy. Environ. Sci. Technol. 41 (2007) 1111-1117.

Baalousha M and Lead J R. Characterization Size fractionation and characterization of natural aquatic colloids and nanoparticles. Sci. Tot. Environ. 386 (2007)93-102.

Baalousha M, Motelica-Heino M, Baborowski M, Hofmeister C and Le Coustumer P. Size based speciation of natural colloidal particles by Flow Field Flow Fractionation-Inductively Coupled Plasma-Mass Spectroscopy- Transmission Electron Microscopy/X-Energy Dispersive Spectroscopy: colloids-trace element interaction. Environ.Sci.Technol. 40 (2006) 2156-2162.

Baalousha M, v.d.Kammer F, Motelica-Heino M, Hilal H and Le Coustumer P. Size fractionation and characterization of natural colloids by Flow-Field Flow Fractionation coupled to Multi-Angle Laser Light Scattering. J.Chromatogr. 1104 (2006) 272-281.

Baalousha M, Motelica-Heino M and Le Coustumer P. Conformation and size of humic substances: Effects of major cation concentration and type, pH, salinity and residence time. J.Colloids. Surf. A. Phys. Engin.Asp. 272 (2006) 48-55.

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Baalousha M, v.d.Kammer F, Motelica-Heino M and Le Coustumer P. 3D characterization of natural colloids by FIFFF-MALLS -TEM. Anal.Bioanal.Chem. 383 (2005) 549-560.

Baalousha M, Motelica-Heino M, Galaup S and Le Coustumer P. Supramolecular structure of humic acids by TEM with improved sample preparation and staining. Res.Microsc.Tech. 66 (2005) 299-306.

Chapters in Books

Baalousha M and Lead J R. Introduction into environmental and human health nanoparticles. In Lead, J.R, Environmental and human health effects of nanoparticles. Blackwell publisher, 2009.

Baalousha M, Lead J R, Von der Kammer, F and Hofmann, Th. Natural colloids and nanoparticles in aquatic and terrestrial environments. In Lead, J.R, Environmental and human health effects of nanoparticles. Blackwell publisher, 2009.

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