

# **JOHN G. FARMER BSc, PhD, CChem, FRSC, FGS**

**Professor of Environmental Geochemistry, School of GeoSciences, University of Edinburgh**

## **DATE OF BIRTH**

18 February 1947

## **CAREER AND EDUCATION**

### **University of Edinburgh (1987- )**

Professor (2004- ) of Environmental Geochemistry, School of GeoSciences  
Reader (2003-04) in Environmental Geochemistry, School of GeoSciences  
Reader (1997-2003), [Director, Environmental Chemistry Unit (1994-2002)], Senior Lecturer (1990-97),  
Lecturer (1987-90) in Environmental Chemistry, School of Chemistry

### **University of Glasgow (1974-86)**

Research Fellow (1976-86), Research Assistant (1974-76), Department of Forensic Medicine and Science

### **Woods Hole Oceanographic Institution (1972-74)**

Postdoctoral Investigator (1972-74), Department of Chemistry

### **University of Glasgow (1965-72)**

Ph.D. Chemistry (Radionuclide Geochemistry) (1969-72)

B.Sc. Chemistry (Upper Second Class Honours) (1965-69)

## **POSITIONS WITH EXTERNAL ORGANISATIONS**

### **Membership of Research Council Committees and Review Panels**

Member, Earth and Space Sciences Panel, Portuguese Foundation for Science and Technology (2009)  
Member, Assessment Committee for Postdoctoral Fellowships in the Earth and Environmental Sciences, Irish  
Research Council for Science, Engineering and Technology (2008)  
Member, Natural Sciences Panel, Swedish Research Council (2006)  
External Assessor, Committee for the Review of the Man-Technology-Environment Research Centre, Örebro  
University, Sweden (2005)  
External Assessor, Committee for the Periodic Quality Review of Environmental Science, Lancaster University,  
(2003)  
External Assessor, Committee for the Periodic Subject Review of Environmental Science, University of Sussex,  
(2002)  
Member, NERC Isotope Geosciences Facility Steering Committee (1996-2002)  
Member, NERC Freshwater Sciences Peer Review Committee (1997-2000)  
Member, NERC Community Programme Working Group on "Restoration of Eutrophic Shallow Lakes" (1996)

### **Membership and Positions of Responsibility with Societies and Institutes**

President (2002-05), Vice-President (2000-02), European Chair (1995-98), Member (1982- ), Society for  
Environmental Geochemistry and Health  
Fellow of the Geological Society of London (2004- )  
Fellow (1985- ), Member (1978-85), Chartered Chemist (1978- ) of the Royal Society of Chemistry  
Member, American Chemical Society (2002- ), International Association of GeoChemistry (2002- ), American  
Association for the Advancement of Science (1995- )  
Research Associate, The Macaulay Institute, Aberdeen (2002- )  
Visiting Scholar, Institute of Environmental Geochemistry, University of Heidelberg, Heidelberg, Germany  
(2004), Hong Kong Polytechnic University, Hong Kong, and Sun Yat-Sen University, Guangzhou, P.R.  
China (2002)

### **Conference Chair**

Sixth International Symposium on Environmental Geochemistry, Edinburgh (2003)  
SEGH Conference on Environmental Chromium Contamination and Remediation, Glasgow (2000)  
Joint Meeting of SEGH/RSC Analytical Division, Analytical Aspects of Environmental Geochemistry and  
Health, Edinburgh (1997)  
Tenth European Conference of the Society for Environmental Geochemistry and Health, Edinburgh (1992)  
Eighth International Conference on Heavy Metals in the Environment, Edinburgh (1991)

### **Editorial Positions with Scientific Journals**

Executive Editor, *Science of the Total Environment* (2002- )  
Member, Editorial Board, *Geochemistry: Exploration, Environment, Analysis* (2002)  
Associate Editor, *Geochemistry: Exploration, Environment, Analysis* (2001-02)  
Co-Editor, *Journal of Geochemical Exploration* (1997-99)  
Member, Editorial Board, *Environmental Geochemistry and Health* (1993- )

## **RESEARCH**

Environmental geochemistry, speciation and behaviour of lead, arsenic, manganese, chromium, antimony, mercury and uranium

Contaminated sediments and soils, focusing on the particular topics of environmental change, biogeochemical processes, contaminated land, and human exposure

## **Recent Publications**

- I.W. Oliver, M.C. Graham, A.B. MacKenzie, R.M. Ellam and J.G. Farmer, Depleted uranium (DU) mobility across a weapons testing site: Isotopic investigation of porewater, earthworms and soils, *Environ. Sci. Technol.* (in press).
- J.G. Farmer and R. Jarvis, Strategies for improving human health in contaminated situations: a review of past, present and possible future approaches, *Environ. Geochem. Health* (in press).
- M.C. Graham, I.W. Oliver, A.B. MacKenzie, R.M. Ellam and J.G. Farmer, 2008, An integrated colloid fractionation approach applied to the characterisation of porewater uranium-humic interactions at a depleted uranium contaminated site, *Sci. Total Environ.* 404, 207-217.
- I.W. Oliver, M.C. Graham, A.B. MacKenzie, R.M. Ellam and J.G. Farmer, 2008, Distribution and partitioning of depleted uranium in soils at weapons test ranges – Investigations combining the BCR extraction scheme and isotopic analysis, *Chemosphere* 72, 932-939.
- J.M. Cloy, J.G. Farmer, M.C. Graham, A.B. MacKenzie and G.T. Cook, 2008, Historical records of atmospheric Pb deposition in four Scottish ombrotrophic peat bogs: An isotopic comparison with other records from western Europe and Greenland, *Global Biogeochem. Cycles* 22, GB2016, doi:10.1029/2007GB003059.
- J.G. Farmer, S. Hillier, D.G. Lumsdon, M.C. Graham and R.J.F. Bewley, 2008, The assessment and remediation of chromite ore processing residue at former disposal sites, Glasgow, Scotland: current status (2007), in *Geotechnics of Waste Management and Remediation* (eds. M.V. Khire, A.K. Alshawabkeh and K.R. Reddy), ASCE Geotech. Spec. Publ. No. 177, 740-747.
- G.J. Patrick and J.G. Farmer, 2007, A lead isotopic assessment of tree bark as a biomonitor of contemporary atmospheric lead, *Sci. Total Environ.* 388, 343-356.
- J.G. Farmer, 2007, Geochemical records of anthropogenic change: lake sediments and peat bogs, *Geochim. Cosmochim. Acta* 71, A268.
- I.W. Oliver, M.C. Graham, A.B. MacKenzie, R.M. Ellam and J.G. Farmer, 2007, Assessing depleted uranium (DU) contamination of soil, plants and earthworms at UK weapons testing sites, *J. Environ. Monit.* 9, 740-748.
- M.C. Graham and J.G. Farmer, 2007, Chemistry of Freshwaters, in *Principles of Environmental Chemistry* (ed. R.M. Harrison), Royal Society of Chemistry, Cambridge, 80-169.
- J.G. Farmer, A.B. MacKenzie and G.H. Moody, 2006, Human teeth as historical biomonitors of environmental and dietary lead: some lessons from isotopic studies of 19<sup>th</sup> and 20<sup>th</sup> century archival material, *Environ. Geochem. Health* 28, 421-430.
- J.G. Farmer, M.C. Graham, C. Yafa, J.M. Cloy, A.J. Freeman and A.B. MacKenzie, 2006, Use of <sup>206</sup>Pb/<sup>207</sup>Pb ratios to investigate the surface integrity of peat cores used to study the recent depositional history and geochemical behaviour of inorganic elements in ombrotrophic bogs, *Global Planet. Change* 53, 240-248.
- S.M. Dunn, S.I. Vinogradoff, G.J.P. Thornton, J.R. Bacon, M.C. Graham and J.G. Farmer, 2006, Quantifying hydrological budgets and pathways in a small upland catchment using a combined modelling and tracer approach, *Hydrol. Process.* 20, 3049-3068.
- R.L. Hough, M. Whittaker, A.E. Fallick, T. Preston, J.G. Farmer and S.J.T. Pollard, 2006, Identifying source correlation parameters for hydrocarbon wastes using compound-specific isotope analysis, *Environ. Pollut.* 143, 489-498.
- M.C. Graham, J.G. Farmer, P. Anderson, E. Paterson, S.J. Hillier, D.G. Lumsdon and R.J.F. Bewley, 2006, Calcium polysulfide remediation of hexavalent chromium contamination from chromite ore processing residue, *Sci. Total Environ.* 364, 32-44.
- G.J. Patrick and J.G. Farmer, 2006, A stable lead isotopic investigation of the use of sycamore tree rings as a historical biomonitor of environmental lead contamination, *Sci. Total Environ.* 362, 278-291.
- J.G. Farmer, E. Paterson, R.J.F. Bewley, J.S. Geelhoed, S. Hillier, J.C.L. Meeussen, D.G. Lumsdon, R.P. Thomas and M.C. Graham, 2006, The implications of integrated assessment and modelling studies for the future remediation of chromite ore processing residue disposal sites, *Sci. Total Environ.* 360, 90-97.
- M.C. Graham, R. Allan, A.E. Fallick and J.G. Farmer, 2006, Investigation of extraction and clean-up procedures used in the quantification and stable isotopic characterisation of PAHs in contaminated urban soils, *Sci. Total Environ.* 360, 81-89.
- J.R. Bacon, J.G. Farmer, S.M. Dunn, M.C. Graham and S.I. Vinogradoff, 2006, Sequential extraction combined with isotope analysis as a tool for the investigation of lead mobilisation in soils. Application to organic-rich soils in an upland catchment in Scotland. *Environ. Pollut.* 141, 469-481.
- M.C. Graham, S.I. Vinogradoff, A.J. Chipchase, S.M. Dunn, J.R. Bacon and J.G. Farmer, 2006, Using size fractionation and Pb isotopes to study Pb transport in the waters of an organic-rich upland catchment, *Environ. Sci. Technol.* 40, 1250-1256.
- C. Yafa and J.G. Farmer, 2006, A comparative study of total and acid-extractable digestion methods for the determination of inorganic elements in peat material by inductively coupled plasma-optical emission spectrometry, *Anal. Chim. Acta* 557, 296-303.