

## ERI 2008 PEER REVIEWED PUBLICATIONS

### Environmental Chemistry Publications

Healy R.M., **Wenger J.C.**, Metzger A., Duplissy J., Kalberer M. and Dommen J. (2008) *Gas/particle partitioning of carbonyls in the photooxidation of isoprene and 1,3,5-trimethylbenzene*, Atmospheric Chemistry and Physics, 8, 3215-3230.

McGillen Max R., Carey Trevor J., Archibald Alex T., **Wenger J.C.**, Shallcross Dudley E. and Percival Carl J. (2008) *Structure–activity relationship (SAR) for the gas-phase ozonolysis of aliphatic alkenes and dialkenes*, Physical Chemistry Chemical Physics, 10, 1757–1768.

Hamilton Jacqueline F., Lewis Alastair C., Carey Trevor J. and **Wenger J.C.** (2008) *Characterization of Polar Compounds and Oligomers in Secondary Organic Aerosol Using Liquid Chromatography Coupled to Mass Spectrometry*, Analytical Chemistry, 80, 474-480.

Gherman T., **Venables D.S.**, Vaughan S., Orphal J. and **Ruth, A.A.** (2008) *Incoherent broadband cavity-enhanced absorption spectroscopy in the near-ultraviolet: application to HONO and NO<sub>2</sub>*, Environ. Sci. Technol., 42, 890–895.

O'Driscoll P., Minogue N., Takenaka N. and **JR Sodeau** (2008) *Release of nitric oxide and iodine to the atmosphere from the freezing of sea-salt aerosol components*, Journal of Physical Chemistry A., 112, 8, 1677-1682.

Burke A.M., Hanrahan J.P., Healy D.A., **Sodeau J.R.**, **Holmes J.D.**, **Morris M.A** (2008) *Large pore bifunctionalised mesoporous silica for metal ion pollution treatment*, Journal of Hazardous Materials, 10.1016/j.jhazmat.2008.07.14

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Chen L, Xu J, Fleming P, **Holmes J.D.** and **Morris M.A.**, (2008) *Dynamic stable nanostructured metal oxide fractal films grown on flat substrates*, J. Phys. Chem. C, 112, 14286-14291.

Li Z., Larsson J.A., Larsson, P. and **Morris M.A.** et. al. (2008) *Copper/molybdenum nanocomposite particles as catalysts for the growth of bamboo-structured carbon nanotubes*, Journal of Physical Chemistry C., 112, 32, 12201-12206.

Wang K., **Morris M.A.**, **Holmes J.D.**, Yu J. and Xu R. (2008) *Thermally stable nanocrystallised mesoporous zirconia thin films*, Microporous and Mesoporous Materials, available online, doi:10.1016/j.micromeso.2008.06.019 25

McCloskey P, Jamieson B, O'Donnell T, **Morris M.A.** and Saibal R., *High-frequency nanostructured magnetic materials for integrated inductors*, J. Magn. and Magn. Mats., 320, 2509.

Farrell R.A., Petkov N., Cherkaoui K., Hurley P., Amenitsch H, **Holmes J.D.** and **Morris M.A.** (2008) *Facile and controlled synthesis of ultra-thin low dielectric constant meso/microporous silica films*, Chem. Phys. Chem., 9, 1524-1527.

Barry L, Tobin J., Copley M., Otway D., **Holmes J.D.** and **Morris M.A.** (2008) *MnS doped mesoporous silica catalysts for the generation of novel carbon nanocages*, Applied Catalysis A, 341, 1-2, 8-11.

O'Callaghan J.M., Copley M.P., Hanrahan J.P., **Morris M.A.** and **Holmes J.D.** (2008) *Supercritical fluid swelling of liquid crystal films*, Langmuir, 24 (2008) 6959.

Petkov N, Xu J, **Morris M.A.** and **Holmes J.D.**, et al. (2008) *Confined growth and crystallography of one-dimensional Bi<sub>2</sub>S<sub>3</sub>, CdS, and SnS<sub>x</sub> nanostructures within channeled substrates*, J. Phys. Chem. C, 112, 7345-7355.

Hanrahan J.P., Donovan A, **Morris M.A.**, **Holmes J.D.** et al (2008) *Synthesis and swelling of large pore diameter mesoporous silica spheres*, J. Mat. Chem., 17, 3881.

Farrell R.A., Petkov N., Cherkaoui K., Hurley P., Amenitsch H, **Holmes J.D.** and **Morris M.A.** (2008) *Thin and continuous films with controlled bi- and tri-modal porosities by embedment of zeolite nanoparticles in a mesoporous matrix*, J. Mat. Chem., 18, 2213-2220.

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Li Z., Larsson A., Larsson P., Ahuja R., Tobin J.M., O'Byrne J., **Morris, M. A.**, Attard G. and **Holmes, J.D.** (2008) *Copper/molybdenum particles as catalysts for the growth of bamboo-structured carbon nanotubes*, J. Phys. Chem. C, 112, 12201-12206.

Kazakova O., Morgunov R., Kulkarni J., **Holmes J.D.** and Ottaviano L. (2008) *Effect of magnetic defects and dimensionality on the spin dynamics of GeMn systems: electron spin resonance measurements*, Phys. Rev. B., 77, 235317 (1-6).

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Morgunov R.B., Dmitriev A.I., Tanimoto Y. and **Holmes J.D.**, et al. (2008) *Spin dynamics in oriented ferromagnetic nanowires Ge<sub>0.99</sub>Co<sub>0.01</sub>*, Physics of the Solid State, 50, 6, 1103-1109.

Varma R.M., **Venables D.S.**, **Ruth A.A.**, Heitmann U., Schlosser E. and Dixneuf S. (submitted in 2008) *Long optical cavities for open-path monitoring of atmospheric trace gases and aerosol extinction*, Appl. Opt.

Orphal J. and **Ruth A.A.** (2008) *High-resolution Fourier-transform cavity-enhanced absorption spectroscopy in the near-infrared using an incoherent broad-band light source*, Opt. Express, 16, 19232-19243.

**Ruth A.A.** and Lynch K.T. (2008) *Incoherent broadband cavity-enhanced total internal reflection*

spectroscopy of surface-adsorbed metallo-porphyrins, *Phys. Chem. Chem. Phys.*, 10, 47, 7098-7108.

Dixneuf S., **Ruth A.A.**, Vaughan S., Varma R.M., Orphal J. (2008) The time dependence of molecular iodine emission from *Laminaria digitata*, *Atm. Chem. Phys. Discuss.*, 8, 16501-16516.

Vaughan S., Gherman T., **Ruth A.A.** and Orphal J. (2008) *Incoherent broadband cavity-enhanced absorption spectroscopy of the marine boundary layer species I<sub>2</sub>, IO and OIO* *Phys. Chem. Chem. Phys.*, 2008, 10, 4471-4477.

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- Franks A., Mark-Byrne G.L., Dow M.J. and **O’Gara F.** (2008) *A putative RNA-binding protein has a role in virulence in Ralstonia solanacearum GMI1000*, Mol. Plant Pathol. 9, 1, 67-72.
- Mulcahy H., O’Callaghan J., O’Grady E.P., Maciá M.D., Borrell N., Gómez C., Casey P.G., Hill C., Adams C., Gahan C.G.M., Oliver A. and **O’Gara F.** (2008). *Pseudomonas aeruginosa RsmA plays an important role during murine infection by influencing colonization, virulence, persistence, and pulmonary inflammation*. Infect. & Immunity 76, 2, 632-638.
- Lawongsa P., Boonkerd N., Wongkaew S., **O’Gara F.**, and Teaumroong N. (2008) *Molecular and phenotypic characterization of potential plant growth-promoting Pseudomonas from rice and maize rhizospheres*, World J. Microbiol. Biotechnol. 24, 9, 1877-1884.
- O’Rourke K.P., O’Donoghue G., Adams C., Mulcahy H., Molloy C., Silke C., Molloy M., Shanahan F. and **O’Gara F.** (2008) *High levels of Lymphotoxin-Beta (LT-Beta) gene expression in rheumatoid arthritis synovium: clinical and cytokine correlations*, Rheumatol. Int. 28, 10, 979-986.
- McAlester G., **O’Gara F.**, and **Morrissey J.P.** (2008) *Signal-mediated interactions between Pseudomonas aeruginosa and Candida albicans*, J. Med. Microbiol., 57, 563-569.
- Kennedy J., Codling C.E, Jones B., **Dobson A.D.W.** and Marchesi J.R. (2008) *Diversity of microbes associated with the marine sponge, Haliclona simulans, isolated from Irish waters and identification of polyketide synthase genes from the sponge metagenome*, Environmental Microbiology, 10, 7, 1888-1902.
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- Kennedy J., Marchesi J.R. and **Dobson A.D.W.** (2008) *Marine Metagenomics: Strategies for the discovery of novel enzymes with biotechnological applications from marine ecosystems*, Microbial Cell Factories, 7, 27.
- Zamocky M., Schumann C., Sygmond C., O’Callaghan J., **Dobson A.D.W.**, Ludwig R., Haltrich D. and Peterbauer C.K. (2008) *Cloning, sequence analysis and heterologous expression in Pichia pastoris of a gene encoding a thermostable cellobiose dehydrogenase from Myriococcum thermophilum*, Protein Expression & Purification, 59, 2, 258-265.
- Gallo A., Peronne G., Solfrizzio M., Epifani F., Abbas A., **Dobson, A.D.W.** and Mulè G. (2008) *Characterization of a pks gene which is expressed during ochratoxin A production by Aspergillus carbonarius*, International Journal of Food Microbiology (accepted - in press) doi:10.1016/j.ijfoodmicro.2008.10.022
- Baker P.W., Kennedy J., **Dobson A.D.W.** and Marchesi J.R. (2008) *Phylogenetic diversity and antimicrobial activities of fungi associated with Haliclona simulans isolated from Irish coastal waters*, Marine Biotechnology (in press).
- Achtman M.** and Wagner M. (2008) *Microbial diversity and the genetic nature of microbial species*, Nat. Rev. Microbiol., 6, 431-440.

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## Sustainable Energy and Environmental Engineering Publications

**Murphy J.D.** and Power N. (2008) *How can we improve the energy balance of ethanol production from wheat?*, Fuel, 87, 1799–1806.

Power N., **Murphy J.D.** and **McKeogh E.** (2008) *What crop rotation will provide optimal first generation ethanol production in Ireland from technical and economic perspectives?*, Renewable Energy, 33, 1444–1454.

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**Menzel K.**, Pesch D., O'Flynn B., Keane M. and O'Mathuna C. (2008) *Towards Wireless Sensor Platform for Energy Efficient Building Operation*, Tsinghua Science & Technology, 13, 1, October, Pages 381-386

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Keller M., O'Donnell J. and **Menzel K.** and **Keane M.** (2008) *Integrating the Specification, Acquisition and Processing of Building Performance Information*, ICCCB-E-XI.

## Marine & Freshwater Publications

Huvenne V.A.I., Masson D.G. and **Wheeler A.** (2008) *The sedimentary environment of the Darwin cold-water coral mounds, N Rockall Trough, International Journal of Earth Science*, on-line first: DOI 10.1007/s00531-008-0312-5.

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**Harrison S.** and Dobson, M. (2008) *Drivers of the Ecology of Adults of Aquatic Insects*. In: Lancaster, J. and Briers, R.A. (Eds) *Aquatic Insects: Challenges to Populations*. CAB International Publishing.



## Biodiversity & Ecotoxicology Publications

**Sheehan D.** (2009) *Physical Biochemistry: Principles and Applications*, Second Edition (Wileys, Chichester, UK), 424pp.

**Sheehan D.** and Tyther R. (Editors) (2009) *Two Dimensional Electrophoresis Protocols* (Humana, Totowa, NJ), Volume 519 in series. *Methods in Molecular Biology*. 515 pp.

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Clé C., Hill L.M., Niggeweg R., Martin C.R., Guisez Y., Prinsen E., **Jansen M.A.K.** (2008) *Modulation of chlorogenic acid biosynthesis in *Solanum lycopersicum*; consequences for phenolic accumulation and UV-tolerance*, *Phytochemistry*, 69, 2149-2156.

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**Sleeman D.P.** (2008) *Quantifying the prey gap for Ireland*. In Davenport, J.L., Sleeman, D.P. & Woodman, PC(eds) *Mind the Gap. Postglacial colonisation of Ireland*. Special Supplement of the Irish Naturalists' Journal.

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## **Environmental Law Publications**

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