

Air Quality

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Air Quality Research Theme

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Air Quality research and monitoring activities in C-CAPS covers indoor and outdoor air pollution, urban and regional-scale air quality, and air quality - climate interactions. Regional air pollution is conducted at Mace Head where Particulate Matter mass and chemical composition is monitored along with ozone levels. Exhaust gas emissions are analyzed and simulated at the Combustion Chemistry Centre (link to: <http://c3.nuigalway.ie/>).

Monitoring and training consultancy services are provided by the Air Quality Technology Centre (AQTC Link: www.nuigalway.ie/physics/consultancy/AQTC/).

Recent Publications

Healy, D., H.J. Curran, J.M. Simmie, D.M. Kalitan, C. M. Zinner, A.B. Barrett, E.L. Petersen, and G. Bourque., Methane/Ethane/Propane Mixture Oxidation at High Pressures and at High, Intermediate and Low Temperatures, Combustion and Flame, Accepted 2008.

Healy, D., H.J. Curran, S. Dooley, J.M. Simmie, D.M. Kalitan, E.L. Petersen, and G. Bourque Methane/Propane Mixture Oxidation at High Pressures and at High, Intermediate and Low Temperatures, Combustion and Flame, Accepted 2008.

Aguilera-Iparraguirre, J., H.J. Curran, W. Klopper, J.M. Simmie, Accurate Benchmark Calculation of the Reaction Barrier Height for Hydrogen Abstraction by the Hydroperoxyl Radical from Methane. Implications for C_nH_{2n+2} where $n = 2 \text{ } \dot{\text{u}} \text{ } 4$, Journal of Physical Chemistry A 2008, vol 112(30) 7047-7054.

Simmie, J.M., G. Black, H.J. Curran, J.P. Hinde, Enthalpies of formation and Bond Dissociation Energies of Lower Alkyl Hydroperoxides and Related Hydroperoxy and Alkoxy Radicals, Journal of Physical Chemistry A 2008 vol 112(22) 5010-5016.

Simmie, J., W.K. Metcalfe, H.J. Curran, Ketene Thermochemistry, ChemPhysChem, Volume 9, Issue 5, 2008, Pages 700-702.