

# Development of Environmental Technologies

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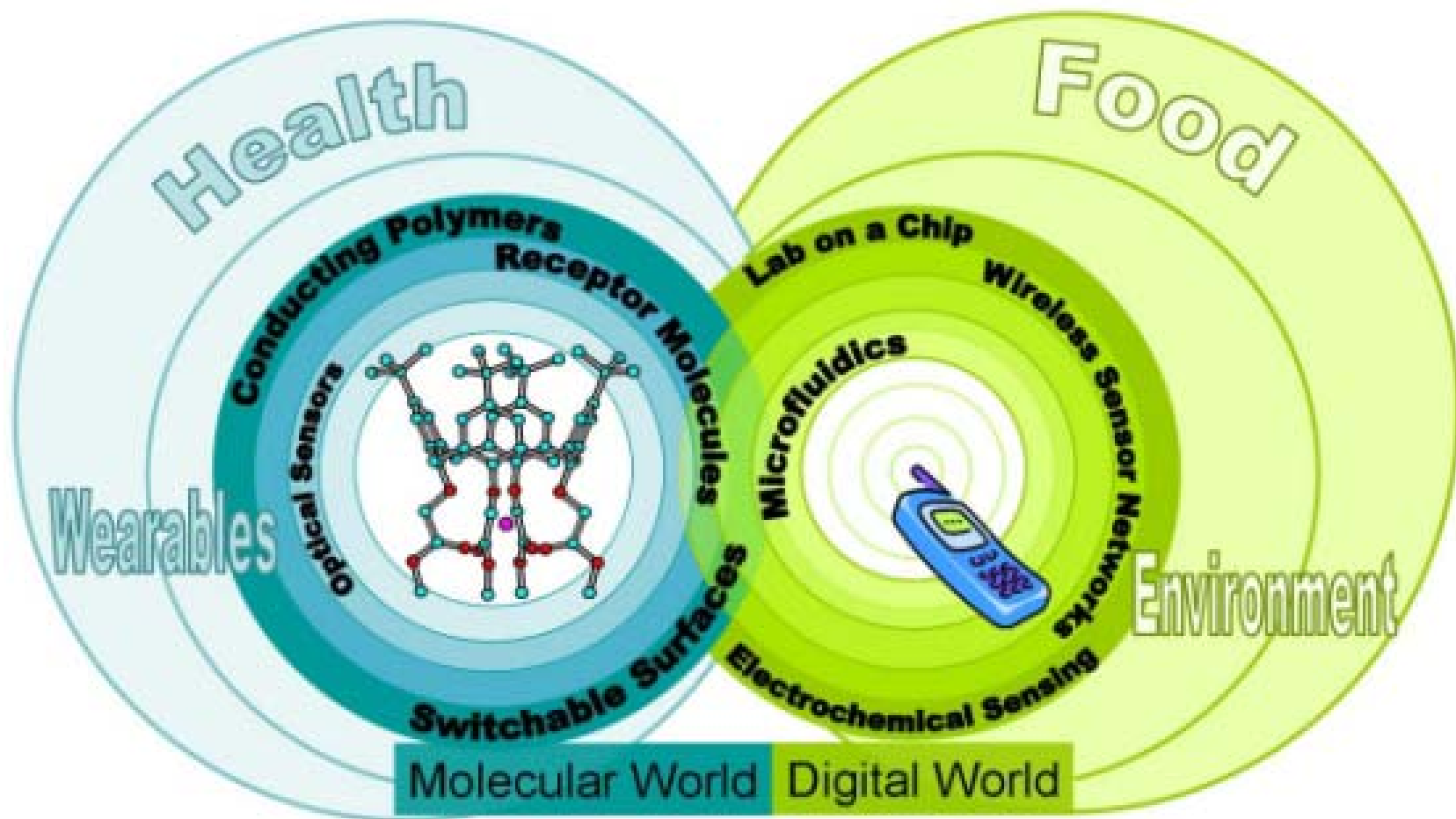
National Centre for Sensor Research

Dublin City University

**March 9<sup>th</sup> 2009**



Adaptive Sensors Group – January 2008



[www.dcu.ie/chemistry/asg](http://www.dcu.ie/chemistry/asg)

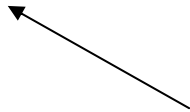
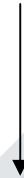
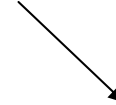
# Biography

- **BSc. (2001) University of Bradford, U.K.,**
  - Chemistry with Pharmaceutical & Forensic Science
- **Industrial Placement:**
  - Freudenberg Nonwovens
- **MPhil (2002) University of Bradford, U.K.**
- **PhD. (2006) University of Bradford, U.K.**
- **Postdoctoral Researcher – DCU since July 2006**

# Waste Management



Greenhouse Gas Environmental Monitoring System (G<sup>2</sup>EMS) developed to monitor the migration of landfill gas to the perimeter borehole wells on a real-time basis and communicate the data back to a stakeholder.



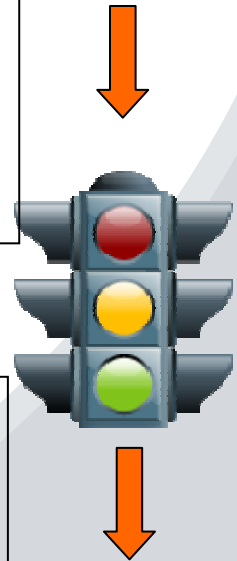


To flare  
or fuel

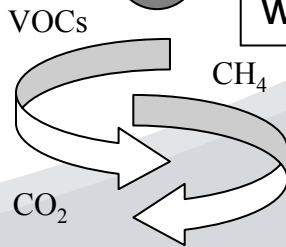
Borehole  
well

Data are logged and averaged. This average is sent via GSM to a stakeholder.

Stakeholder can then make the decision if more readings are to be taken and communicate with unit.



Extraction



Landfill gas generation



# Why work in Engineering/Science?





# Acknowledgements

- Funding from EPA under grant code 2005-AIC-MS-43-M4
- Science Foundation Ireland for additional funding under grant code SFI 03/IN.3/1361 and 07/CE/I1147 - "CLARITY: Bringing Information to Life- CSET (RP1-2)".

**Thank you for your kind attention**