

Development of Environmental Technologies

Dr. Breda Kiernan

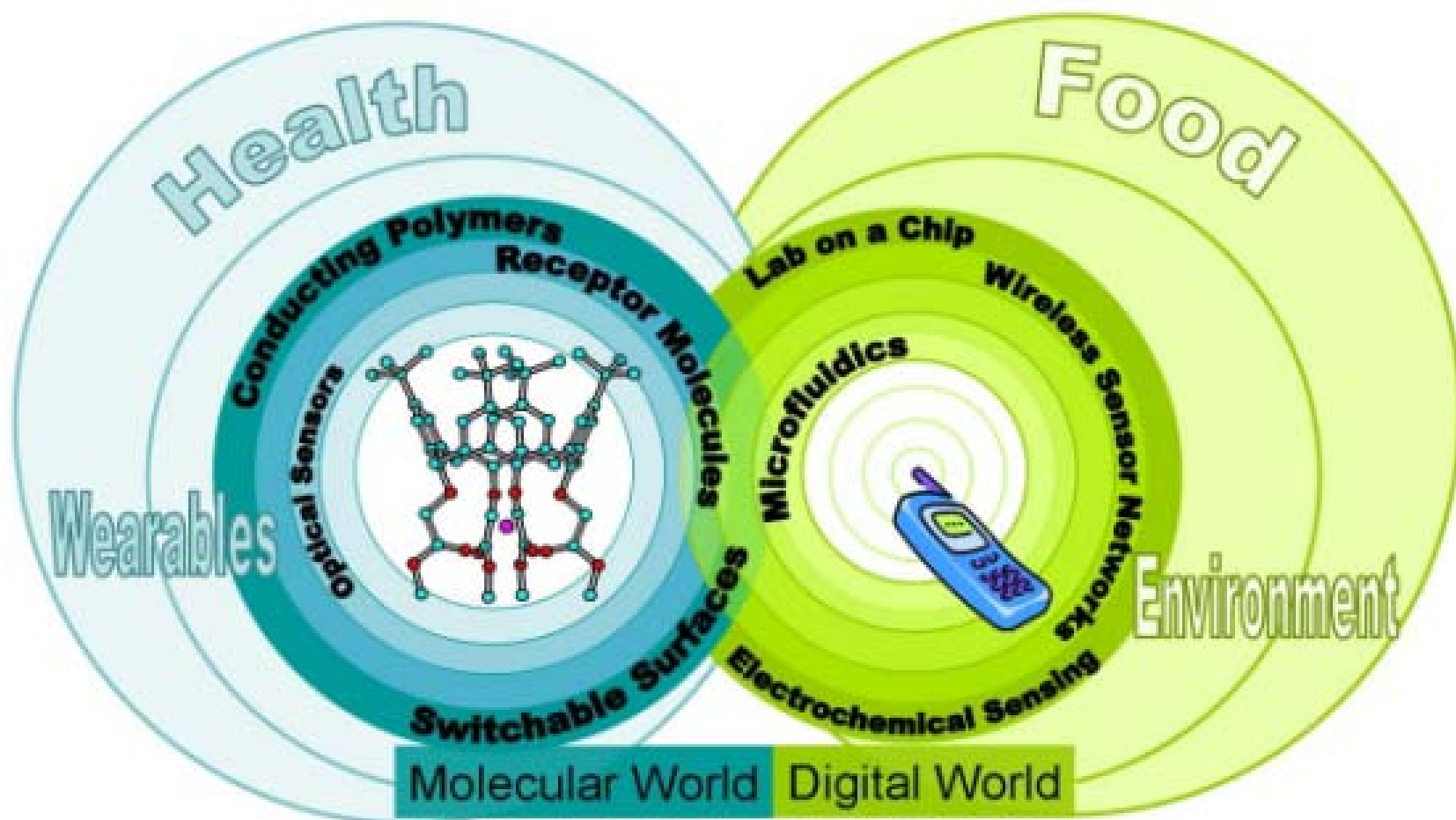
National Centre for Sensor Research

Dublin City University

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Adaptive Sensors Group – January 2008



www.dcu.ie/chemistry/asg

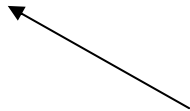
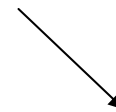
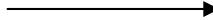
Biography

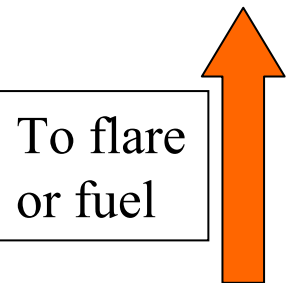
- **BSc. (2001) University of Bradford, U.K.,**
 - Chemistry with Pharmaceutical & Forensic Science
- **Industrial Placement:**
 - Freudenberg Nonwovens
- **MPhil (2002) University of Bradford, U.K.**
- **PhD. (2006) University of Bradford, U.K.**
- **Postdoctoral Researcher – DCU since July 2006**

Waste Management



Greenhouse Gas Environmental Monitoring System (G²EMS) 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.



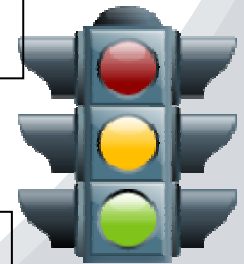


To flare
or fuel

Borehole
well



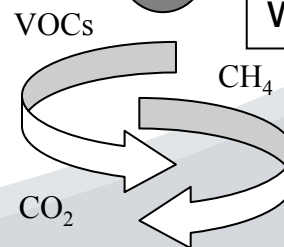
Data are logged and averaged. This average is sent via GSM to a stakeholder.



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

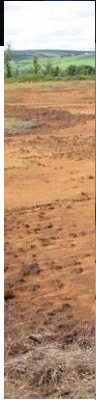


Extraction



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