

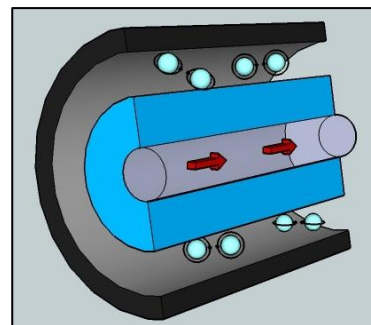
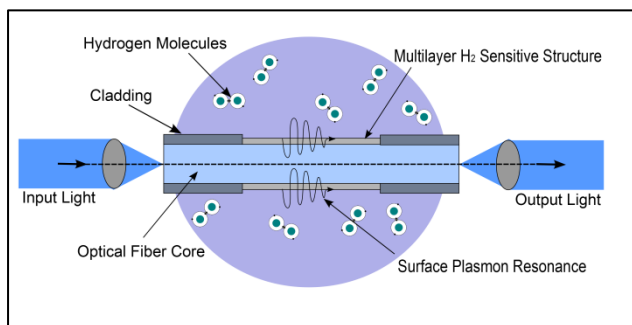


PhD Candidate in Physics - Photonics: Fionn Downes  
Academic Supervisor: Dr. Cian Taylor (IT Sligo)  
Funding Body: IT Sligo Presidents Bursary

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Research Project:

The development of a robust optical fibre surface plasmon resonance based sensing device for the purpose of detecting H<sub>2</sub> gas.



Achievements:

**Best Student Paper Presentation Award** at SPIE Photonics Europe 2016 conference.  
Postgraduate Chairperson 2014-15, Secretary 2015-16.  
IT Sligo Postgraduate Representative with Quality & Qualifications Ireland 2015.  
Postgraduate Society Personality of the Year Award 2015-16.  
Postgraduate Representative on the IT Sligo Research & Innovation Committee 2015-16.

Presentations:

Environ 2014-16, AECOM 2015, Eurosensors 2015, SPIE Photonics Europe 2016.

Publications:

Downes, F. and Taylor, C. M. (2016) 'Theoretical investigation into the optimized design of a durable OFSPR hydrogen sensor based on a PdY alloy', 98860L-98860L-13.

<http://dx.doi.org/10.1117/12.2227128>

Downes, F. and Taylor, C. M. (2015) 'Optical Fibre Surface Plasmon Resonance Sensor Based on a Palladium-Yttrium Alloy', Procedia Engineering, 120, 602-605.

<http://dx.doi.org/10.1016/j.proeng.2015.08.738>