

## **Ping Hua**

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### **Biography**

**Dr Ping Hua** graduated in Physics from Suzhou University, China. She obtained the PhD degree in Optoelectronics from the ORC, University of Southampton, UK. Ping came to the UK in 1989 and has been with the ORC since 1990 where she currently is working as a senior researcher. Her research interests include integrated optical waveguide-based sensors applied to biology, chemistry and environmental monitoring systems.

### **Reconfigurable optical waveguide multi-analyte system for river water pollution monitoring**

Research on fluorescence-based integrated optical immunoassay multisensing systems has gained growing interest in the last ten years because these sensors offer high sensitivity and good specificity, can simultaneously detect multiple analytes in a single measurement and are fast, robust and cost-effective. Therefore they have the potential to replace conventional chromatographic techniques as the monitoring systems for the rapid assessment of pollution in water. These highly multiplexed analytical systems are also in demand in other fields such as clinical diagnostics and forensic science. This research work presents advances in multi-analyte integrated optical fluorescence-based sensors, their integration into a novel, reconfigurable, multi-bio-sensing system and their use in detecting organic pollutants in river water.