

Environmental Sensors and Subsystems Projects

A Scalable, Modular, Multi-Stage, Peristaltic, Electrostatic Gas Micro-Pump

Ali Besharatian, Karthik Kumar, Rebecca L. Peterson, Luis P. Bernal, and Khalil Najafi

A Microscale Gas Chromatograph for High-Speed Determinations of Explosive Marker Compounds

Gustavo Serrano, Lindsay Amos, Hungwei Chang, Will Collin, Nicolas Nuñovero, and Edward T. Zellers

Multi-Transducer Arrays Using Nanoparticle Interface Layers for Vapor Discrimination

Lindsay K. Wright, Kee Scholten, and Edward T. Zellers

Kinetic Factors Affecting the Design and Performance of Micropreconcentrators for μ GC

Thitiporn Sukaew and Edward T. Zellers

Micro OptoFluidic Ring Resonators for Micro Gas-Chromatograph Detectors

Kee Scholten, Xudong Fan, and Edward T. Zellers

Multivariate Curve Resolution of Co-Eluting Peaks Measured with Microsensor Array Detectors in Micro-Scale Gas Chromatographs

Sun Kyu Kim and Edward T. Zellers

On Column Optical Vapor Sensors in Micro-GC Development

Maung Kyaw Khaing Oo, Karthik Reddy, Jing Liu, and Xudong (Sherman) Fan

Adaptive Two-Dimensional Microgas Chromatography

Jing Liu and Xudong "Sherman" Fan

Microfabricated Passive Preconcentrator/Injector for a μ GC (μ PPI)

Jung Hwan Seo, Jing Liu, Xudong Fan, and Katsuo Kurabayashi

Adaptation of a Microscale GC for VOC Determinations of Biomarkers of Exposure/Disease in Breath and Saliva

Jonathan Bryant-Genevier, Sun Kyu Kim, Nicholas Eddy, and Edward T. Zellers

Comprehensive 2-D Gas Chromatography (GC \times GC) using a MEMS Thermal Modulator

Dibyadeep Paul, Gustavo Serrano, Sung Jin Kim, Will Collin, Ken D. Wise, Edward T. Zellers, and Katsuo Kurabayashi

Microdischarge-Based Radiation Detectors Utilizing Stacked Electrode Arrays in a TO-5 Package

Christine K. Eun and Yogesh B. Gianchandani

Effects of Flow Rate and Temperature on MPN-coated Chemiresistor-Array Micro-GC Detectors for Explosive Marker Compounds

Lindsay K. Wright and Edward T. Zellers



Inexpensive Portable Sensors Based on Analyte-Triggered Gel Formation

Jing Chen, Yash J. Adhia, and Anne J. McNeil