SEPTEMBER 2019 NEWSLETTER

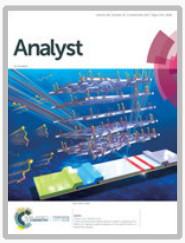
*REDFINCH is an EU H2020 research project aimed at developing Photonic Integrated Circuits (PICs) at mid-infrared wavelengths, in order to realise compact chemical sensors for both gas and liquid. Specific targeted applications within the project include; **process gas analysis** in refineries, **gas leak detection** in petrochemical plants, and **milk protein analysis** for the dairy industry.*

Project Meeting, Montpellier, France, July 2019

The fifth REDFINCH face-to-face project meeting was held on 3-4 July 2019, in the impressive modern facilities of the IES (Institut d'Electronique et des Systèmes) labs on Campus St Priest in the Université de Montpellier, France. The meeting included discussions on the progress of the photoacoustic cells, on-chip MIR lasers, Si PIC designs, liquid sensors and instrument assembly/testing, as well as market analysis and dissemination, and concluded with a tour of the IES facilities.

REDFINCH Paper Published in *Analyst*

"High-throughput quantitation of bovine milk proteins and discrimination of commercial milk types by external cavity-quantum cascade laser spectroscopy and chemometrics"



*REDFINCH researchers at **TU Wien** have published a paper in the September issue of the RSC journal Analyst. The paper describes a spectroscopic method for milk analysis using external cavity quantum cascade lasers, which is faster and less labour-intensive than the commonly employed wet-chemical methods. Not only can it quantify total protein and individual protein types (casein, β-lactoglobulin, α-lactalbumin) but it can also determine the type of heat treatment (pasteurization, different types of extended shelf life ESL, UHT) that was applied to the milk. The ultimate aim in REDFINCH is to implement this technique in an on-chip sensor. Read the full paper here: https://dx.doi.org/10.1039/C9AN00746F*

REDFINCH @ Trade Shows/Conferences

SENSOR+TEST DIE MESSTECHNIK-MESSE The Measurement Fair

SENSOR+TEST 2019
Nuremburg, Germany, 25-27 June 2019

- ***Argotech** [Stand 5-331]*
- ***Fraunhofer IPM** [Stand 5-248]*
- ***mirSense** [Stand 5-432/2]*
- ***Endress+Hauser** [Stand 1-313]*

Photonex EUROPE 2019

Photonex Europe 2019
Ricoh Arena, Coventry, UK, 9-10 October 2019

Visit Argotech at Stand B14

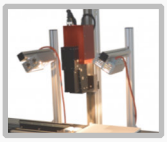
- ***Dr. M. McAuliffe, CIT*** *2:20pm, 10 October, Theatre 2*
  "Extracting physical attributes from hyperspectral images"

*REDFINCH also presented at (inter alia): **PIERS2019** (Rome, Italy), **Transducers 2019** (Berlin, Germany), **ICPPP20** (Moscow, Russia)*

Related News

- *Partner **Endress+Hauser** expands its advanced analysis centre of competence in Lyon. The €2M investment includes facilities for the group's SpectraSensors subsidiary, a leader in TDLAS technology.*

  See: www.de.endress.com/en/media-center/news-and-press-releases/inauguration-lyon-2019



- *The Technology Gateway at partner **CIT-CAPPA** has acquired a new hyperspectral imaging system, the HySpex SWIR-384. This further expands the capabilities the Gateway offers to industry partners.*

  See: www.cappa.ie/cappas-new-hyperspectral-imaging-system

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