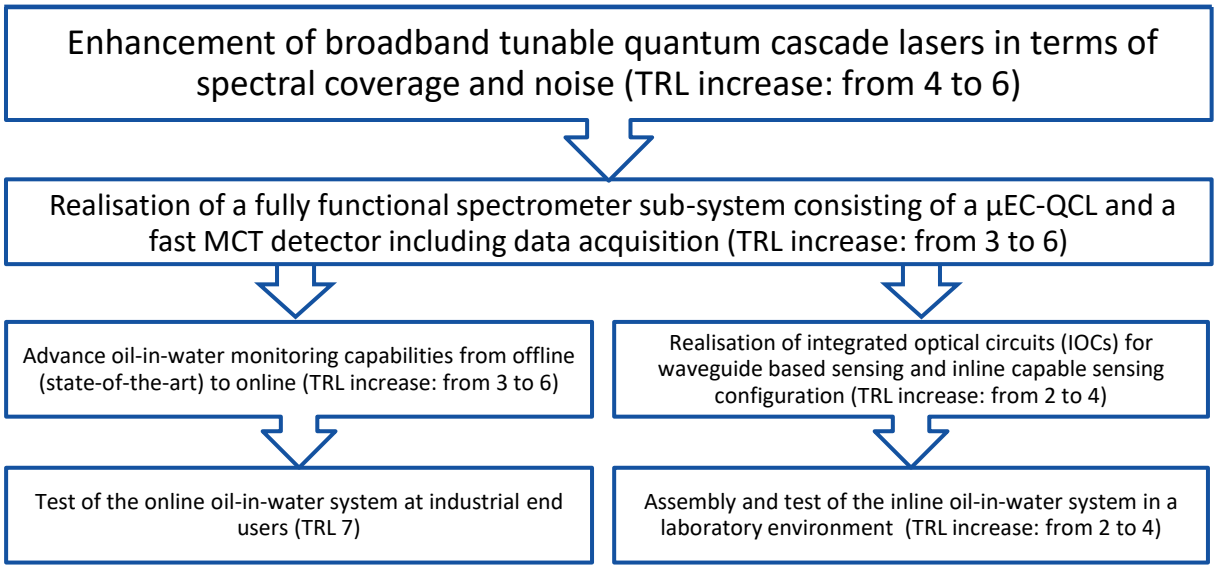
ANNOUNCEMENT LETTER

AQUARIUS, a European cooperative research project, is officially starting on 1st January 2017 with a set duration of 36 months. It receives funding from The European Union's Horizon 2020 research and innovation program and is an initiative of the Photonics Public Private Partnership.

AQUARIUS: Broadband Tunable QCL based Sensor for Online and Inline Detection of Contaminants in Water

Water plays an important role in the world economy, including process water, waste water as well as drinking water. Due to industrial processes, the variety and concentration of chemical species in the aquatic systems can be quite diversified, **presenting a challenge in terms of both water purification strategies and water quality control**. To assure a safe environment, novel water monitoring technologies are needed for all types of water. These new technologies shall enable **pervasive water monitoring** which requires the replacement of laboratory based offline methods by online or inline monitoring strategies. The AQUARIUS project addresses the development of a new generation of photonic sensing solution due to the need for pervasive sensing for a safer environment. The expected outcome is the development of **high-performance online systems and compact and cost-effective inline systems**. AQUARIUS will provide **an on- and inline capable mid-IR sensing solution** to meet legal provisions for industrial **waste water and drinking water monitoring**. Significant **enhancement in sensitivity** will be achieved by further advancement of the laser source and the detector as well as an **innovative combination of sample extraction and preparation** with polymer functionalized waveguides. The AQUARIUS sensing solution will be developed along the **entire value chain** towards integration in industrially proven online devices for water control driven by **strong industrial commitment** in the consortium.
The following key objectives will be addressed by AQUARIUS:



The project leading to this application has received funding from the European Union under grant agreement No 731465. This project is an initiative of the Photonics Public Private Partnership.

The main impact from the AQUARIUS project will be the transformation of high sensitive and high selective oil in water analysis **from offline to online and inline** operation. This will enable the increase of measurement frequency from typically one measurement a day to 1 measurement within 1 minute (online) or up to 30 seconds (inline). This **improvement of response time** enables the operation of oil-in-water analysis for dense-meshed monitoring and integrated facility control.

The AQUARIUS consortium consists of **8 partners** from **5 different countries** (Austria, Germany, Poland, Belgium, The Netherlands). Due to **excellent cooperation** in the proposal creation the basis for a very **promising collaboration** has already been set.

The Partners:

- TECHNIKON Forschungs- und Planungsgesellschaft mbH, Austria
- Quantared Technologies GmbH, Austria
- Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung E.V., Germany
- OMV Exploration & Production GmbH, Austria
- VIGO System S.A., Poland
- Interuniversitair Micro-electronicacentrum IMEC VZW, Belgium
- Technische Universität Wien, Austria
- KWR Water B.V., Netherlands

For more information visit http://www.aquarius-project.eu [coming soon]

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