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Workshop 3: ASSEMBLY AND PACKAGING OF OPTICAL AND LASER-OPTICAL SYSTEMS FOR HARSH ENVIRONMENTS

691688 LASIG-TWIN: LASER IGNITION - A TWINNING COLLABORATION FOR FRONTIER RESEARCH IN ECO-FRIENDLY FUEL-SAVING COMBUSTION (http://www.lasig-twin.eu/)

Date: 26 September 2018
Place: Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung e.V.
Fraunhofer IOF, Albert-Einstein-Strasse 7, Jena 07745
GERMANY

- PROGRAMME -

In the framework of a Horizon 2020 funded project, Fraunhofer IOF conducts a one-day workshop about the assembly and packaging of high precision optical and laser-optical systems for harsh environments, focusing in particular on joining and bonding technologies for passive and active optical components. The project's example is a laser spark plug for internal combustion engines, where the optical window for the Q-switched laser has to withstand high pressure and temperatures from the combustion chamber. Also other application examples from automotive, aviation and aerospace, gas sensing, vacuum and x-ray optics, and laser diodes etc. will be covered by a variety of experts, while the event also allows for networking and the exploration of new challenges and ideas.

- 26 SEPTEMBER 2018 -

9:00 - 9:30	Participants arrival. Registration	
9:30 - 9:45	**Welcome. Introduction**	
	Erik BECKERT	Fraunhofer IOF, Jena, Germany
	Nicolaie PAVEL	National Institute for Laser, Plasma and Radiation Physics (INFLPR), Magurele, ROMANIA
9:45 - 10:15	**Laser Ignition - A Review of Laser Spark Plug Development and Achievements in Engine Ignition**	
	Nicolaie PAVEL	INFLPR, Magurele, Romania
10:15 - 10:45	**Miniaturized Frequency Doubled DPSS Laser for ESA - ExoMars Mission**	
	Marta GILABERTE	Fraunhofer IOF, Jena, Germany
10:45 – 11:15	Coffee break	
11:15 – 12:00	**Micro-Integrated Semiconductor Laser Modules for Precision Spectroscopy Applications in Space**	
	Ahmad Ibrahim BAWAMIA	Ferdinand-Braun-Institut, Berlin, Germany
12:00 - 12:45	**Fraunhofer IOF's Packaging and Bonding Technologies for Harsh Environments**	
	Erik BECKERT	Fraunhofer IOF, Jena, Germany
12:45 – 13:30	Lunch (on site)	
13:30 – 14:15	**Solderjet Bumping – a Versatile Joining Technology for High-Reliable Opto-Electronic Components**	
	Matthias FETTKE	Pactech GmbH, Nauen, Germany
14:15 - 15:00	**Space Qualified Solutions with High-Power Diode Lasers**	
	Martin WÖLZ	Jenoptik Laser GmbH, Jena, Germany
15:00 - 15:15	**Final Discussion & Closing Remarks**	
	Moderators: Erik BECKERT & Nicolaie PAVEL	
15:15 - 16:00	**Laboratory Tour**	

- END OF THE WORKSHOP -