



Enabling Science through European Electron Microscopy

Initial list of industrial collaborations

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Revision history log

Version number	Date of release	Author(s)	Summary of changes
V0.1	16/04/2019	Randi Holmestad (NTNU) and John Walmsley (UCAM)	Preparation of templates sent to partners
V0.2	26/04/2019	All academic partners	Template filled-in by all academic partners
V0.3	29/04/2019	Randi Holmestad (NTNU)	Completed table sent to the coordinator
V0.4	30/04/2019	Paul Bersans (Euronovia)	Addition of industrial collaborations in ESTEEM2 and edition of the document
V1.1	30/04/2019	Peter van Aken (MPG – Coordinator)	Proofreading and submission of the document

Introduction

Previous EU projects (ESTEEM and ESTEEM2) have shown that there is a high threshold for participation of industries with limited experience of advanced TEM and therefore a proactive approach to industrial engagement is needed.

UCAM and NTNU act as Industrial Liaison Officers (ILO) for ESTEEM3 and share responsibility for coordination of this task. In this deliverable, UCAM and NTNU have set a list of industrial collaborators based on the industrial collaborations of the ESTEEM3 partners.

Companies will be contacted to discuss needs, explain the ESTEEM3 project, particularly the TA process, and put them in contact with relevant partners.

List of industrial collaborations

Company name	Materials working on	TEM interest	contact person (at ESTEEM3 partner)	Colonne1
Acerinox	Stainless steels production	Microstructure, chemical analysis	José J. Calvino	juan.almagro@acerinox.com
ads-tec GmbH	Printed circuit boards	Microstructure, chemical analysis	Sabine Kühnemann	s.kuehnemann@fkf.mpg.de
AECL (Canada)	Alloys	Microstructure, chemical analysis	Angus Kirkland	angus.kirjland@materials.ox.ac.uk
AG der Dillinger Hüttenwerke	Metallic alloys	Microstructure, chemical analysis	Vesna Srot	v.srot@fkf.mpg.de
AGC Flat Glass Europe	Multilayer coating of glass	Microstructure, chemical analysis	Peter A. van Aken	p.vanaken@fkf.mpg.de
Airbus (France)	Aeronautical alloys	Microstructure, chemical analysis, in-situ	Joel Douin	douin@cemes.fr
Alicona Imaging	Metrology	Microstructure, chemical analysis	Ferdinand Hofer	ferdinand.hofer@felmi-zfe.at
AMS Sensors	Sensor Technologies	Microstructure, chemical analysis	Giorgio Divitini	gd322@cam.ac.uk
Anton Paar	Rheometry, metrology	Microstructure, chemical analysis	Ferdinand Hofer	ferdinand.hofer@felmi-zfe.at
Arcelor-Mittal S.A.	Steel, tin	Microstructure, chemical analysis	Ricardo Ibarra	ibarra@unizar.es
Areva	Steel	Microstructure, chemical analysis	Angus Kirkland	angus.kirjland@materials.ox.ac.uk
AstraZeneca	Materials for controlled drug release	Microstructure, chemical analysis	Eva Olsson	eva.olsson@chalmers.se
Attolight	TEM instrumentation	TEM instrumentation	Mathieu Kociak	mathieu.kociak@u-psud.fr

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Aubert & Duval	Titanium alloys	Microstructure, chemical analysis	Etienne Snoeck	etienne.snoeck@cemes.fr
Austrian Foundry Institute (Austria)	Al-Si alloys	Microstructure, chemical analysis	Ferdinand Hofer	ferdinand.hofer@felmi-zfe.at
Automotive Lighting Reutlingen GmbH	Dielectric thin films on aluminum substrates	Microstructure, chemical analysis	Sabine Kühnemann	s.kuehnemann@fkf.mpg.de
AVL List GmbH (Austria)	Nanoparticles and aerosols	Microstructure, chemical analysis	Ferdinand Hofer	ferdinand.hofer@felmi-zfe.at
Bekaert	Metallic alloys / coated steel wires	Microstructure, chemical analysis	Alexander Neirinckx	alexander.neirinckx@uantwerpen.be
Benteler	Aluminium	Microstructure, chemical analysis	Randi Holmestad	randi.holmestad@ntnu.no
BH Poland sp.zoo		Microstructure, chemical analysis	Adam Kruk	kruczek@agh.edu.pl
Borealis Linz	Polymers	Microstructure, chemical analysis	Ferdinand Hofer	ferdinand.hofer@felmi-zfe.at
BorgWarner BERU Systems GmbH	Si3N4 and MoSi2 composite ceramics	Microstructure, chemical analysis	Peter A. van Aken	p.vanaken@fkf.mpg.de
CEA Cadarache (France)	Energy	Microstructure	Mac Legros	legros@cemes.fr
Coperion GmbH	Stress corrosion cracking in metallic construction materials	Microstructure, chemical analysis	Peter A. van Aken	p.vanaken@fkf.mpg.de
CrayoNano	Semiconductor nanowires	Microstructure, chemical analysis	Ton van Helvoort	a.helvoort@ntnu.no
Daimler AG	Corrosion performance of metallic coatings	Microstructure, chemical analysis	Peter A. van Aken	p.vanaken@fkf.mpg.de
Dr. Fritsch GmbH & Co. KG	Metal ceramics	Microstructure, chemical analysis	Sabine Kühnemann	s.kuehnemann@fkf.mpg.de
Electrosiences (PME) (UK)	Piezoelectrics	Microstructure, in-situ	Martin Hytch	hytch@cemes.fr
ElringKlinger AG	Nickel-based superalloys	Microstructure, chemical analysis	Sabine Kühnemann	s.kuehnemann@fkf.mpg.de
EMINATE LTD	Transport, Energy and Biomedical materials	Microstructure, chemical analysis	Adam Kruk	kruczek@agh.edu.pl

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EPCOS OHG (Austria)	Ceramics	Microstructure, chemical analysis	Ferdinand Hofer	ferdinand.hofer@felmi-zfe.at
EpiShine	Organic solar cells	Microstructure, chemical analysis	Eva Olsson	eva.olsson@chalmers.se
EPRI	Ni-alloys	Microstructure, chemical analysis	Angus Kirkland	angus.kirjland@materials.ox.ac.uk
Essity	Supermolecular materials	Microstructure, chemical analysis	Eva Olsson	eva.olsson@chalmers.se
Evonik Resource Efficiency GmbH	Cathode materials	Microstructure, chemical analysis	Alexander Neirinckx	alexander.neirinckx@uantwerp.be
Explomet Zakład Technologii Wysokoenergetycznych		Microstructure, chemical analysis	Adam Kruk	kruczek@agh.edu.pl
Exxon Mobil	Polymer films	Microstructure, chemical analysis	Alexander Neirinckx	alexander.neirinckx@uantwerp.be
Freescale Semiconductor (France)	Transistors	Microstructure, chemical analysis	Etienne Snoeck	etienne.snoeck@cemes.fr
Gatan Inc (Pleasanton, USA)	Sensors and sensor materials	Testing and usability of peripherals	Andras Kovacs / Vadim Migunov / Karsten Tillmann	a.kovacs / v.migunov@fz-juelich.de / k.tillmann@fz-juelich.de
General Electric Company Polska Sp. z o. o.		Microstructure, chemical analysis	Adam Kruk	kruczek@agh.edu.pl
General Electric India (Bangalore, India)	Nickel based superalloys	Microstructure	Rafal Dunin-Borkowski / Karsten Tillmann	r.dunin-borkowski@fz-juelich.de / k.tillmann@fz-juelich.de
GlaxoSmithKline	Pharmaceuticals	Microstructure, chemical analysis	Paul Midgley	pam33@cam.ac.uk
Graphene Nanotech S.L.	Graphene	Microstructure, chemical analysis	Ricardo Ibarra	ibarra@unizar.es
Haldor Topsoe A/S	Catalysis	Microstructure, chemical analysis	Eva Olsson	eva.olsson@chalmers.se
Hitachi High Technology (Japan)	TEM manufacturers	Ultrafast instrumentation	Florent Houdellier	houdellier@cemes.fr

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Hydro Aluminium	Aluminium	Microstructure, chemical analysis	Randi Holmestad	randi.holmestad@ntnu.no
Indigomed (Belgium)	health devices	Microstructure, chemical analysis	Giuseppe Nicotra	giuseppe.nicotra@imm.cnr.it
Infineon (Germany)	Copper Interconnects, semiconductors	Microstructure, chemical analysis	Ferdinand Hofer	ferdinand.hofer@felmi-zfe.at
Johnson Matthey	Catalytic solutions and Noble Metals	Microstructure, chemical analysis	José J. Calvino	ozkayad@matthey.com
Kirchhoff Automotive GmbH (Attendorn, Germany)	Injection moulding metals	Microstructure	Doris Meertens / Karsten Tillmann	d.meertens@fz-juelich.de / k.tillmann@fz-juelich.de
LAM Research AG (Austria)	Semiconductor devices	Microstructure, chemical analysis	Ferdinand Hofer	ferdinand.hofer@felmi-zfe.at
Microsoft Quantum	Semiconductor nanowires for quantum devices	Microstructure, chemical analysis	Eva Olsson	eva.olsson@chalmers.se
Nanoimmunotech S.L.	Nanoparticles & functionalized NPs	Microstructure, chemical analysis	Ricardo Ibarra	ibarra@unizar.es
Neuman Aluminium	Aluminium	Microstructure, chemical analysis	Randi Holmestad	randi.holmestad@ntnu.no
Nexans	Aluminium	Microstructure, chemical analysis	Randi Holmestad	randi.holmestad@ntnu.no
Nippon Steel & Sumitomo Metal Corporation (Japan)	Ferritic steels	Microstructure	Doris Meertens / Lei Jin / Karsten Tillmann	d.meertens@fz-juelich.de / l.jin / k.tillmann@fz-juelich.de
Norsk Titanium	Titanium	Microstructure, chemical analysis	Randi Holmestad	randi.holmestad@ntnu.no
NXP (France)	Automotive	Microstructure, in-situ	Marc Legros	legros@cemes.fr
Orsay Physics	Cold Atom ion/electron gun developemnt	TEM instrumentation	Mathieu Kociak	mathieu.kociak@u-psud.fr
OSRAM Opto Semiconductors GmbH	InGaN/GaN based LEDs	Microstructure, chemical analysis	Etienne Snoeck	etienne.snoeck@cemes.fr
P&G	(in)organic microcapsules / micelles / vesicles	Microstructure, chemical analysis	Alexander Neirinckx	alexander.neirinckx@uantwerp.be
Plansee SE (Austria)	Hard metals	Microstructure, chemical analysis	Ferdinand Hofer	ferdinand.hofer@felmi-zfe.at

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PN Sensor		Detectors	Peter Nellist	peter.nellist@materials.ox.ac.uk
Pratt & Whitney Aero Power Rzeszów/Hamilton Sundstrand Poland		Microstructure, chemical analysis	Adam Kruk	kruczek@agh.edu.pl
Pratt & Whitney Rzeszów S.A.		Microstructure, chemical analysis	Adam Kruk	kruczek@agh.edu.pl
PROGRESJA S A		Microstructure, chemical analysis	Adam Kruk	kruczek@agh.edu.pl
QiD Nanotechnologies	Nanocatalysts	Microstructure, chemical analysis	Susana Trasobares	susana.trasobares@uca.es
Quantum Designed Materials	Perovskites - Thin films	Microstructure, chemical analysis	Ricardo Ibarra	ibarra@unizar.es
Quantum Detectors		Detectors	Angus Kirkland	angus.kirjland@materials.ox.ac.uk
RAFAKO S.A.	Steels for Coal fired Power Plant	Microstructure, chemical analysis	Adam Kruk	kruczek@agh.edu.pl
RCPE GmbH (Austria)	Nanoparticles in pharmaceuticals	Microstructure, chemical analysis	Ferdinand Hofer	ferdinand.hofer@felmi-zfe.at
Repsol	Nanoparticles - catalysts	Microstructure, chemical analysis	Ricardo Ibarra	ibarra@unizar.es
Robert Bosch GmbH	Fuel injection valves, ceramics of alumina and zirconia	Microstructure, chemical analysis	Peter A. van Aken	p.vanaken@fkf.mpg.de
Rolls Royce	Aerospace and power systems	Microstructure, chemical analysis	John Walmsley	jcw80@cam.ac.uk
Saint-Gobain	Glasses, thin films	Structure, optical properties, chemical analysis	Odile Stéphan	odile.stephan@u-psud.fr
Samsung	semi-conductors	structure, optical properties, chemical analysis	Odile Stéphan	odile.stephan@u-psud.fr
Seagate Technology (UK)	Microelectronics	Microstructure, in-situ	Etienne Snoeck	etienne.snoeck@cemes.fr
Soitec (France)	Microelectronics	Microstructure	Alain Claverie	calverie@cemes.fr

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Solvay (France)	solvent for exfoliation	Microstructure, chemical analysis	Giuseppe Nicotra	giuseppe.nicotra@imm.cnr.it
STMicroelectronics (France)	Microelectronics	Operando devices	Christophe Gatel	gatel@cemes.fr
STMicroelectronics (Italy)	Microelectronics	Microstructure, chemical analysis	Giuseppe Nicotra, Corrado Spinella	giuseppe.nicotra@imm.cnr.it
SZA (Austria)	Welded alloys	Microstructure, chemical analysis	Ferdinand Hofer	ferdinand.hofer@felmi-zfe.at
Tecnan S.L.	Nanoparticle technologies	Microstructure, chemical analysis	José J. Calvino	idoia.sancet@tecnan-nanomat.es
Thales	Semi-conductors	structure, optical properties, chemical analysis	Odile Stéphan	odile.stephan@u-psud.fr
ThyssenKrupp Steel Europe AG (Duisburg, Germany)	Thin sheet metal alloys	Microstructure	Doris Meertens / Karsten Tillmann	d.meertens@fz-juelich.de / k.tillmann@fz-juelich.de
Titania, Ensayos y Proyectos Industriales	Testing and certification of materials for aerospace industry	Microstructure, chemical analysis	José J. Calvino	miguelangel.rodriguez@titania.aero
Total (France)	Solar cells	Microstructure, chemical analysis	Bénédicte Warot-Fonrose	warot-fonrose@cemes.fr
Treibacher Industrie AG	Ceramics, hard metals, catalysts	Microstructure, chemical analysis	Ferdinand Hofer	ferdinand.hofer@felmi-zfe.at
Umicore	Catalyst / anode-cathode materials	Microstructure, chemical analysis	Alexander Neirinckx	alexander.neirinckx@uantwerpen.be
VI Systems GmbH	AlGaInP/GaAs based LEDs	Microstructure, chemical analysis	Etienne Snoeck	etienne.snoeck@cemes.fr
Voest Alpine Linz	Steels, alloys	Microstructure, chemical analysis	Ferdinand Hofer	ferdinand.hofer@felmi-zfe.at
Westinghouse (USA)	Zr alloys	Microstructure, chemical analysis	Angus Kirkland	angus.kirjland@materials.ox.ac.uk
WSK Rzeszow	Materials for jet-engine gas turbines	Microstructure, chemical analysis	Adam Kruk	kruczek@agh.edu.pl