

Matinée d'information et de réseautage sur les prochains appels à projets européens Matériaux, Industrie du futur, Energy efficient buildings

*Pitching session
for project ideas and proposition of competencies*

04/07/2019 - Villeurbanne



Auvergne
Rhône-Alpes
Entreprises



L'Europe à la portée de votre entreprise



ViaMéca
Pôle de compétitivité mécanique



techtera

AXELERA
catalyseur de croissance durable



tenerdis
ENERGY CLUSTER

USPF innovative powders



- Presentation:

- Aurélie Nouveau, R&D Manager
- Umicore Specialty Powders France, “USPF”, industry (formerly eurotungstene)
 - Development, fabrication and commercialization of fine metallic powders with high added value
 - Large range of powders : Co, pre-alloyed, W, WC.
 - Owned by Umicore Cobalt and Specialty Materials since 2017: worldwide leader in the recycling, refining, transformation and marketing of cobalt and nickel specialty chemicals
- R&D and lab department : 4 engineers, 4 R&D technicians, 8 lab technicians (quality inspection)
 - 12% of added value injected in R&D every years
- Expertise on:
 - Fine metallic powders, typically reducible under H₂ like Co, WC, W, FeCuCo, Ni...
 - Hydro-metallurgical process, reduction, milling
 - Chemical and physical characterization of powders and relative sintered materials
 - Usual applications/industries: hard metals, diamond tools, refractory materials, MIM

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- <https://www.umicore.fr/fr/a-propos/nos-sites/grenoble/>

USPF innovative powders



- Expertise and competencies
 - Ability to test process **from small size to pilot size** (100g – 5kg – 200kg) with industrial development team: furnaces under H₂ (reduction/sintering), milling, blending, sieving.
 - Lab with **large range of characterization**:
 - On powders: tap/Scott/Archimedes' density, Fisher size, sieving, PSD, BET,
 - Sintering: hot pressing, free sintering,
 - Dilatometry, TGA-TDA, SEM, optical microscopy,
 - Mechanical properties: hardness, Charpy test, tensile test, 3 points bending test,
 - Chemistry: O, C, ICP, AA,...
 - Collaborations with INPG (SIMaP), INSA Lyon (LaMCoS)
 - 2008 – 2016: involved in MIM projects (BioPIM, ProPIM, NewPIM)

USPF innovative powders



- Interested by:
 - Projects with **innovative metallic powders** and relative process
 - Possibility to work around our existing powder or process
 - **Functionalization** process, e.g. to make our powders flowing !
 - Possibility to work on new products, new process on known business
 - e.g. **additive manufacturing** with process adapted for fine powders: metal binder jetting, MIM-like...
 - Open to discussion in order to **widen our activity and business**