

Project idea/ Field of expertise:

DUPLEX PLASMA/ION IMPLANTATION
(cleaning, grafting, functional coatings)

Organisation Name:

Materia Nova, non-profit R&D organisation

Adressed challenge(s)/ PPP(s):

Advanced functional products with unique technologies (TRL 3-4 to TRL 6-7)

Adressed topic(s) in Work Programme:

- **LC-BAT-8-2020 (SS)** : NEXT GENERATION BATTERIES FOR STATIONARY ENERGY STORAGE
- **LC-SC3-RES-1-2019-2020**: DEVELOPING THE NEXT GENERATION OF RENEWABLE ENERGY TECHNOLOGIES
- **LC-SC3-RES-9-2020**: NEXT GENERATION OF THIN-FILM PHOTOVOLTAIC TECHNOLOGIES

Materia Nova

International recognized expertise

- **EE-EF surface technologies** (e.g. customized vacuum plasma, exclusive ion implantation/BHV bipolar high voltage sputtering tools).
Lab. & Pilots (pre-industrial) demo & qualification
- **Tailored functional products** (flat, R2R, small objects/powder)
- **Plasma diagnostics** (OES, LIF/TALIF, mass spectrometry ...)
 - Life Cycle Thinking (LCA) – Material Science

Industrial projects related to the topic

- INDUSTRIAL WALLOON PLATFORM : MIRAGE
- PROJECTS : CZTZ (PV GEN.II), OLED I & II, HYLIFE (PEMFC) ...

Past experience in EU-funded projects

- ALTI2DE, MATCHING, CHOPIN, STELLAR, GSMART (in construction), OPP3D, PONAMP, ADDMAN4FOOD/HARICOT (submitted)

Our project idea / expertise

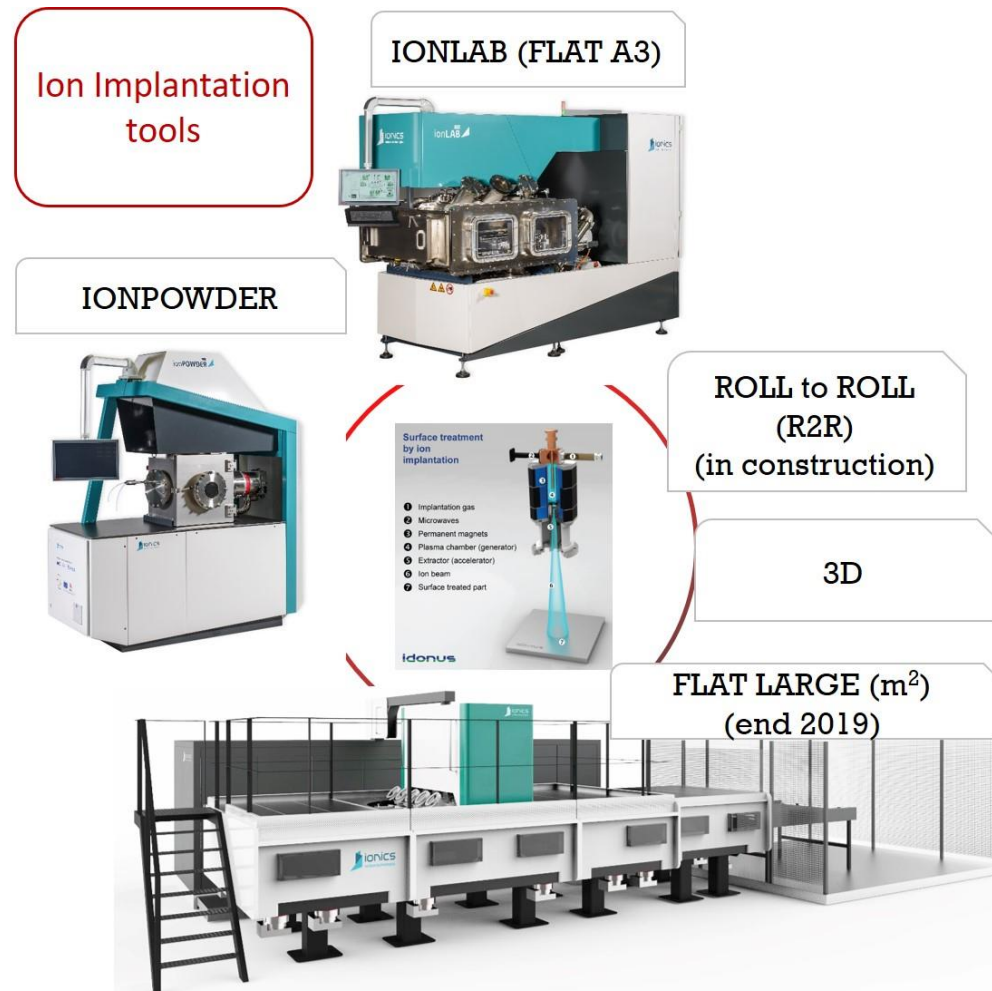
New generation batteries with our **DUPLEX PLASMA/ION IMPLANTATION** Technologies (also for PV, PEMFC ...).

ADVANTAGES

- **Technical improvements** : dielectric barriers, electrodes, passivation, doping, tribological, catalytic ... (TRL 2 to 4)
- **Surface treatment turnkey tools**,
- **Industrial Engineering** through **WALIBEAM** platform

OFFER

- **Improved parts of the global battery/PV/PEMFC technologies**
- **Dedicated Lab. pilot tools** (flat A3, powders ...)
- **Material science** knowledge and characterization tools
- **Large existing IP basis** (products & processes) in Walibeam platform
- **Industrial key-players**
- **Life Cycle Thinking** (LCA, Ecoconception)



Consortium (if any)

Identified potential partners / Competence offer

Name	Type	Country	Role in the project
Materia Nova (Walibeam Guidance)	R&D Center	Belgium	DUPLEX PLASMA/ION IMPLANTATION surface treatments solutions (TRL 3-4 to 6-7)
Ionics Group (Walibeam platform)	SME	Belgium France	Advanced surface treatments technologies (automotive, building, appliances, electronics ...)
AGC Glass Europe (Walibeam platform)	LE	Belgium Europe	Worldwide leader in high tech flat glass (Glass products, engineering, Industrial production lines)

Partner search

Profile	Type	Country	Role in the project
Key-players	R&D Center SME & GE	EU Non EU	Active partner in existing H2020 Project consortium for innovative batteries. Collaboration on solar panels or energy- efficiency systems

Contact details

Contact person	Fabrizio Maseri
Organisation	MATERIA NOVA
Adress	Parc Initialis Avenue Nicolas Copernic 3 B-7000 MONS (Belgium)
Phone	Tel : + 32 (0) 474 950 377
E-mail	fabrizio.maseri@materianova.be www.materianova.be



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