START UP CHALLENGE AWARDS AND NOMINEES

THE 3 AWARDS

Following the jury meeting on April 5th and the nomination of 18 Start Ups on April 15th, the Grand Prix and the other 2 Awards were finally announced during the Gala Dinner on June 13th. Prof. Victoire de Margerie, Jury Chairman states : «The 3 Awards went legitimately to 3 start ups that fitted the best with the WMF objective of decoupling materials consumption from sustainable growth while creating value for all involved stakeholders. Or in other words to these that could best demonstrate their impact in Using Materials Smarter, Less & Longer».

GRAND PRIX

The « **GRAND PRIX** » (50,000 € in cash as well as a custom market survey to be realized by Special Chem) was awarded to Jelena Stojadinovic, CEO of **MEMBRASENZ** (Germany), by Prof. Victoire de Margerie, Jury Chairman and Prof. Stéphane Mangin, Jury Vice Chairman.
MEMBRASENZ (Bochum, Germany) : Gas-separating membranes to be used in alkaline electrolysers (in order to split water into H2 and oxygen) while achieving excellent gas barrier properties and with 50% higher ionic conductivity compared to state of the art Zirfon membranes.

SPECIAL AWARD CRITICAL MATERIALS

The « **SPECIAL AWARD CRITICAL MATERIALS** » (20,000 € in cash as well as a custom market survey to be realized by Special Chem) was given to Preston Bryan, CEO of **MOMENTUM TECHNOLOGiES** (USA) by Reinhold Dauskardt and Matt Price, members of the Jury.
MOMENTUM TECHNOLOGIES (Dallas, USA) : MSX membrane Technology (reverse osmosis) that extracts high purity rare earth oxides from a wide range of magnetic waste feedstock (MRIs, cell phones, electric motors) without requesting the use of high temperatures or pressures.

COUP DE CŒUR AWARD

The « **COUP DE CŒUR AWARD** » (20,000 € in cash as well as a custom market survey to be realized by Special Chem) was awarded to Marescotti Ruspoli, CEO of **AERONAUTICAL SERVICES** (Italy) by Bernard Pinatel and Edith Coune, members of the jury.
AERONAUTICAL SERVICES (Roma, Italy) : Customized nano structured materials for extreme tasks and related mathematical models to predict the performance of such materials noticeably in the field of high temperature shielding & fireproof, electro magnetic waves absorbing & shielding and Sound Absorbing.

The jury

- Christophe Cabarry, CEO Special Chem (France)
- Edith Coune, COO Innovation Fund (Belgium)
- Prof. Reinhold Dauskardt, Stanford University (USA)
- Joe De Simone, CEO & Co Founder Carbon 3D (USA)
- Gervais Jacques, COO Rio Tinto Aluminium (Canada)
- Prof. Stéphane Mangin, Institut Jean Lamour (France)
- Prof. Victoire de Margerie, Vice Chairman World Materials Forum (France) - Chairman
- Tony O'Neill, Group Technical Director Anglo American (UK/Australia)
- Bernard Pinatel, President Refining and Chemicals Total (France)
- Matt Price, MD Cyclotron Road Berkeley (USA)
- Sophie Zurquiyah, CEO CGG (France)

THE OTHER 15 NOMINEES

ALIGNED CARBON (San Jose, California) / John Provine
Carbon Nano Tubes that would support further transistor scaling (so called Moore Law) thanks to their integration into the semiconductor manufacturing process (in combination with FinFet).

ASTRILEUX (Berkeley, California) / Supriya Jaiswal
Advanced materials for EUV Lithography to manufacture ICs at 7 nm and smaller.

DEMETA (Rennes, France) / Patrick Piot
New class of polymer manufactured from a underutilized by-product of the petroleum industry (dicyclopentadiene), with a simpler production process, lower carbon and energy footprint and superior performances (toughness, lightness) than existing materials (epoxy, polyester, vinylester or PU).

FLUENCE ANALYTICS (New Orléans, USA) / Alex Reed
Big Data to monitor real time polymer reaction and achieve optimum reaction efficiency/product quality thanks to adjusting process variables such as temperature, pressure, reagent feed rates, and reaction time.

FREDSENSE (Calgary, Canada) / David Lloyd
Innovative, faster and more sensitive (1ppb) electro chemical sensors for detecting very low concentrations of Arsenic and other contaminants in industrial water such as for gold mine effluent treatment.

FULL MOON (Stanford, California) / Ehsan Sadeghipour
First low power and low cost sensor capable of quantifying and differentiating between various molecules with 1st used case in detecting leaks of natural gas with the same performance as existing expensive IR spectroscopic sensors.

HYMAG'IN (Grenoble, France) / Camille Crouzet
Hydrothermal oxidation of ferrous wastes into high performance magnétites for water treatment.

KEBOTIX (Cambridge, USA) / Jill Becker
Combining data and AI with robotics to discover and create advanced chemicals and materials at a faster rate and at the push of a button.

MATERIALS ZONE (Israel) / Assaf Anderson
Research platform for Scientific Data and AI modeling with the aim to accelerate the advent of new technologies thanks to harvesting, interpreting, and exchanging materials science related data.

MOSAIC MATERIALS (Emeryville, California) / Tom Mc Donald
Separation technology that reduces the capital and operating expenses of carbon capture from nearly any mixture, including large point sources, natural gas, biogas, and ambient air.

NAWA (Le Rousset, France) / Ulrik Grape
Electrode material that combines nano/clean technologies for a Carbon Battery that stores more electricity, more rapidly - telephones, cars, renewable energies, buildings.

OPUS 12 (Berkeley, California) / Nicholas Flanders
Technology that bolts onto any source of CO2 emissions and with only water and electricity as inputs transforms it into chemical products such as ethylene & methane.

RAMLAB (Rotterdam, NL) / Vincent Wegener
Wire Arc Additive Manufacturing (WAAM) that makes additive manufacturing of large parts feasible at acceptable cost, speed and quality.

SAFI Organics (Kenya) / Samuel Rigu
Novel chemical process in order to break down cellulosic chains 100 times faster than traditional composting without any external energy or heat and locally produce a substrate sufficiently organically rich to support microbial growth and retain nutrients moisture in the soil effectively.

TRIMATERIALS (Brescia, Italy) / Stefano Sacrato
Paints that prevent buildings from collapsing in an earthquake.