**Press release**

**What’s next?** - **The 25 most promising Nordic cleantech start-ups selected by an international jury**

We are very proud to present the top 25 Nordic Cleantech start-ups.

This third edition of the Nordic Cleantech Open competition saw a record breaking 107 cleantech companies applying. An international jury of more than 50 influential representatives from multinational companies and venture capital have been involved in selecting this year’s top 25. Among the jury members are representatives from International Finance Corporation – IFC (Int), Idinvest Partners (France), Evonik Corporate Venturing (Germany), General Electric, Veolia (France), Tsing Capital (China), Dow Venture Capital (Switzerland), Fortum (Finland), Grundfos (Denmark) and the Swedish Energy Agency.

"*The Nordic Cleantech Open is always a great opportunity to discover new and innovative companies from Scandinavia. This year's cohort is diverse and promising, we are very much looking forward to meeting with the entrepreneurs*", says Julien Mialaret, Investment Manager at Idinvest Partners, France.

This year Estonia was invited to participate in the competition and what a first year they had! With 11 companies entering, two of them made it to the top 25. Sweden, as previous years, had the most entrants and the biggest share of the top 25 as well. Norway had the best results in terms of share of entrants that made it to the top 25.

”*We see an ever increasing flow of brilliant, innovative companies coming out of the Nordic and Estonian innovation systems. This is what’s next! It is a great display of what the future holds. Trends that we see is that they are increasingly innovative, solves real industry problems and are driven by younger and more hungry teams. This bodes well for the future*”, says Magnus Agerström, Managing Director of Cleantech Scandinavia – organisers of the Nordic Cleantech Open.

The selection of the top 25 is just the beginning for these companies. An intensive program lies ahead. 8-9th March the international jury and the companies will meet for a weekend at Nordic Camp at Trolleholm Castle. In April a group of the companies will go to Paris to meet with European investors and industrials at the Nordic Cleantech Showcase. The winners will be announced at the final event in Stockholm, May 19th.

Here are the selected 25:

**Arsizio
arsizio.com**
Arsizio has come up with nothing less than a whole new production method, Dynamic 3D-extrusion. The method enables; 10-50% savings in material, weight & energy, 10-20% higher efficiency in heat-transfer & solar-energy uptake and 20-80% lower production costs. The method is 100% compatible with existing production lines.

**ATC Industrial Group / Scypho**[**www.atcindu.com**](http://www.atcindu.com#_blank) **and** [**www.scypho.com**](http://www.scypho.com#_blank)
ATC has developed Scypho, a self- learning system for indoor climate control. Without changing their behaviour homeowners can save up to 30% energy while at the save time comfort is improved. Scypho is a self- learning the system that knows when to start the heating or cooling in order to provide the ideal temperature when a person arrive home. When people are away and during the night, Scypho regulates the temperature to maximize energy savings.

**Biocover**[**www.biocover.dk**](http://www.biocover.dk#_blank)
BioCover has developed the SyreN systems for application of slurry to farmland. The SyreN system uses the technique of acidification (sulphuric acid) to change ammonia (gas) to ammonium (salt) during application of slurry. This reduces the emission of ammonia with up to 70% eliminating airborne eutrophication. The solutions developed by BioCover are turning a pollution problem of global scale into a profitable fertilizing solution.

**BioGTS**[**www.biogts.com**](http://www.biogts.com#_blank)
BioGTS have developed a new cost-efficient and scalable biorefinery concept for treatment of organic waste and its conversion into renewable energy, vehicle biofuels, chemicals and fertilizers. The concept is based on unique, patented biodiesel and biogas technologies and have 4 times quicker ROI than the competitors.

**Chromafora**[**www.chromafora.com**](http://www.chromafora.com#_blank)
Chromafora offers the market a way to selectively purify municipal & industrial solvents from heavy metals. The waste metal residues that are produced can be recycled and the material returned to the market at a profit. First choice of market is power plants that incinerate waste. Other potential markets are the mining industry and nuclear industry.

**Cityntel**[**www.cityntel.ee**](http://www.iot.ee/)
Cityntel is a new generation Smart Streetlight control that uses a wireless network technology. This technology enables the creation of a self-configuring wireless network that make it the only truly Plug & Play smart streetlight control system on the market. The solution makes it possible to save up to 80% of electricity used for street lighting and gain significant reduction in maintenance costs.

**Clean Motion**[**www.cleanmotion.se**](http://www.cleanmotion.se#_blank)
Clean Motion have developed the electric tricycles Zbee. The key to the vehicles energy efficiency is the low weight. Zbee only weighs 230 kg. The low weight makes the Zbee require a much smaller battery than any competitor. Clean Motion is currently setting up production facilities in Indonesia and India in order to be able to supply these gigantic markets with a green vehicle at an affordable cost.

**ClimaCheck**[**www.climacheck.com**](http://www.climacheck.com#_blank)
ClimaCheck addresses the market of larger refrigeration & air conditioning equipment. The business idea is to realise best possible performance of the RAC-systems, using a unique method for online analyses. The result is commonly energy savings of 10 to 40%. Payback time for a ClimaCheck system will be very short, usually only a few months.

**CorPower Ocean**[**www.corpowerocean.com**](http://www.corpowerocean.com#_blank)
CorPower Ocean is bringing a new type of compact Wave Energy Converters to market. The concept includes unique mechanical design inspired by the pumping principles of the human heart. Active phase control by latching enables 3-4 times increase in power absorption compared to conventional passive wave power buoys.

**CrayoNano**[**www.crayonano.com**](http://www.crayonano.com)
CrayoNano is developing optoelectronic epiwafers and devices based on semiconductor nanowires on graphene. The result is a flexible and extremely thin and lightweight epiwafer able to produce or emit large amounts of energy from a small area using less material. Today’s flexible electrodes are made of organic compositions, with significant lower efficiency and robustness.

**Cyclicor**[**www.cyclicor.com**](http://www.cyclicor.com#_blank)
Cyclicor has developed a technology platform that makes it possible to remove all isocyanates from the production of polyurethanes and all bisphenols from the production of polycarbonates. Via a new simple and cost competitive chemical synthesis pathway Cyclicor has the ability to produce bio and non-biobased polycarbonates for a range of consumer and industrial applications.

**Disruptive Materials**[**www.disruptivematerials.com**](http://www.disruptivematerials.com#_blank)
Disruptive Materials has invented a new material named UpsaliteTM. Upsalite is a mesoporous form of magnesium carbonate with extraordinary properties. To mention a few, Upsalite has the best moisture adsorption capability in the world and at the same time low temperature regeneration. Upsalite´s unique properties have a huge impact on energy efficiency in dehumidifiers, dishwashers, HVAC systems, etc.

**DWT**[**www.dwt.as**](http://www.dwt.as#_blank)
DWTs innovation is a financially attractive technology, which will revolutionize the impregnation process of wood. The technology is based on high frequency and vacuum pressure. This significantly prolongs the lifespan of the wood because of the immensely improved distribution of impregnation liquid. It will also make it possible to use less or non-toxic impregnation agents without compromising the results.

**Ecofective**[**www.ecofective.com**](http://www.ecofective.com#_blank)
Ecofective supplies an energy and cost saving solution for existing buildings. The system collects and measures data to determine the buildings thermal behaviour and then influence the existing HVAC system to consider available free heat and adjusting for optimum energy use and indoor climate. The payback time for customers is within 2 heating seasons.

**Ferroamp Elektronik**[**www.ferroamp.com**](http://www.ferroamp.com#_blank)
Ferroamps EnergyHub allows solar cells and local energy storage to be combined in a single home unit. The EnergyHub automatically controls the energy flows between solar cells, energy storage, local loads and the grid. This control is able to optimize the economical benefit for the consumer. The solution has a patented current equalizing technology and a modular power stack and battery that enable scalability.

**Giamag Technologies**[**www.giamag.com**](http://www.giamag.com#_blank)
Based on unique and patented technology, Giamag Technologies designs and develops magnet systems and devices, which produce very strong magnetic forces. The patented magnet design constitutes the strongest magnetic separation technology on the market, with a broad range of possible applications within e.g. life science, medtech, automotive, aerospace, mining, and IT.

**Graphene Batteries**[**www.graphenebatteries.no**](http://www.graphenebatteries.no#_blank)
The business idea is to exploit graphene´s potential in the Li‐ion battery market. In this application graphene may help solve the major performance bottlenecks of Li‐ion battery technology for the EV‐market. Graphene Batteries will sell significantly improved materials and technology licenses to battery manufactures and build a gradual and steady stream of revenue.

**Nocart**[**www.nocart.fi**](http://www.nocart.fi#_blank)
Nocart offers conversion and storage solutions for small power plants. The Nocart Power Generation Unit can be connected with multiple different types of power units, such as wind turbines and solar panels. Energy storage allows storing of power when producing more than consuming and usage when the energy source is not available.

**Optistring Technologies**[**www.optistring.com**](http://www.optistring.com#_blank)
Optistring develops a novel inverter technology for grid connected photovoltaic installations. The module level electronics increase the energy harvest, up to 25%, in the final PV installation. The Optistring technology is the combination of all the different competing alternatives advantages to a cost level similar to that of the simplest and cheapest inverters.

**Orbital Systems**[**www.orbital-systems.com**](http://www.orbital-systems.com#_blank)
Orbital Systems have developed a disruptive water recycling technology in the form of the world’s most efficient shower unit. The most amazing thing is that the system manages to save up to 90% of the water and 80% of the energy used for a shower. The technology enables a comfortable and eco-friendly as well as economically smart lifestyle and do not compromise with comfort.

**SenSiC**[**www.sensic.se**](http://www.sensic.se#_blank)
SenSiC develop, designs and manufactures silicon carbide based gas sensors for high temperature operation. The sensors can operate from 175° to 450° Celsius and are matched to sense a number of various emissions (O2, NH3, CO, NOx) from combustion. Basically the technology challenge the Lambda sensor which has been manufactured in 500.000.000 pieces of since 1978.

**Spectral Engines**[**www.spectralengines.com**](http://www.spectralengines.com#_blank)
Spectral Engines’ introduce a miniaturized spectral sensor, utilizing innovative microelectromechanical technology. The product enables brand new applications, where measurements have not been possible due to the high cost and large size of analysers. Spectral Engines drop the cost of the key component by a factor of 100, and in addition make the system smaller, simpler and more robust.

**Stigo electric scooter
stigobike.com**
Stigo scooter is an elegant and practical personal vehicle for daily urban commuting in busy cities and travel destinations with planes, yachts and motorhomes. No other vehicle can be folded in two seconds and taken indoors and public transportation like a luggage on the wheels. The primary customers include: daily urban commuters; yacht owners and caravan travellers.

**Tamturbo**[**www.tamturbo.fi**](http://www.tamturbo.fi#_blank)
Tamturbo's oil free turbo compressors meet the needs of the most demanding process applications such as pharmaceuticals, food and beverages, electronics and paper. In these processes any risk of oil contamination must be excluded. Compared to any other known solution Tamturbo's compressors offer the most advanced solutions for compressed air free of oil.

**Thermo Power Scandinavian**[**www.thermopower.se**](http://www.thermopower.se#_blank)
The company focuses on introduction of refrigeration units for road transports. Thermo Power refrigeration units have lower maintenance costs, weight is reduced by 700 kg, carries environmentally friendly refrigerant, have lower noise and lower production costs compared with existing coolers. Also the higher efficiency of the unit leads to significant reduction in fuel consumption.

The Nordic Cleantech Open is a business competition aiming to identify, upgrade and display the top 25 early stage clean tech companies in the Nordic region each year. Partners and sponsors to the competition are; Cleantech Scandinavia, Swedish Energy Agency, Tekes, Tillväxtverket, Autodesk, LADEC, Enterprise Estonia, Estonian Development Fund, Innovit, Klak, Level39 and Pivotal Innovations.

**Web site**

For more information about the competition and the companies visit

<http://www.nordiccleantechopen.com>

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**Press**

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