Press Release

Turning Captured CO_2 Into Graphene, Graphite And Other High Value Products

CVMR Corporation ("CVMR") announced today that it has acquired controlling shares of Enercarbon Inc. ("Enercarbon"). Kamran M. Khozan, Chairman and CEO of CVMR has accepted to act as the interim President and CEO of Enercarbon.

Enercarbon Inc. is a privately held, Canadian corporation based in Toronto, founded by Dr. S. Mosadegh and Dr. H. Radfarnia. It has developed a modular, cost effective "membrane contactor" that captures carbon dioxide (CO_2) from the exhaust gas sources and through a proprietary process, developed jointly by CVMR and Enercarbon, turns it into valuable products such as graphene, graphite, various building materials, as well as diesel and jet fuel, at commercially competitive prices.

Being modular these systems are easily scalable and can be mounted on skids for different gas feed capacities and various conditions in various locations. The purity of the carbon extracted through this method allows production of graphene, graphite and other products with high purity, without the usual contaminants that exist in refining of mineral graphite.

"The synergy between Enercarbon Inc., and CVMR Corporation brought us together. We are collaborating to produce a host of new products that are highly sought after through a unique process that reduces greenhouse effect, cleans the air and turns a dangerous pollutant, CO_2, into useful modern materials." stated Kamran M. Khozan, Chairman and CEO of CVMR Corporation.

Enercarbon's research and development focuses on mitigating CO_2 by turning it into valuable materials. The emitted CO_2 is captured then turned into products such as graphene, titanium oxide-based building materials, diesel and jet fuel and a host of other products, where the CO_2 is settled and trapped in the structure of such materials. Some of the novel building materials created through this process not only reduce and capture the emitted CO_2, they have unique properties such as self-cleaning surfaces that resist mold and mildew, known as "anti-fogging properties" in the industry, and when mixed with nano-powders of silver or copper they incorporate anti-bacterial properties.

The joint research and development efforts of CVMR and Enercarbon are focused on utilizing CO_2 to produce high value products using a proprietary design for the equipment built with low cost, readily available parts that are incorporated into patented processes for commercial use. The source material, carbon dioxide, is abundant and the process does not use the usual

corrosive and toxic chemicals that are currently used in conventional methods. More importantly, the product range from conversion of CO_2 is almost limitless.

Graphene Based Products

Graphene is an amazing material. It is one of the lightest and strongest materials discovered so far. It conducts heat and electricity better than most substances. These qualities allow graphene to be integrated into numerous applications. Moreover, it is expected that in conjunction with other 2D crystals amazing compounds with wider applications can be invented in the near future.

Whether from exfoliation of graphite or CVMR-Enercarbon method of creating graphene from CO_2, this monolayer substance is only one atom thick and therefore, can be considered the thinnest material that is quite stable when exposed to the elements such as temperature and air and can act as an atomic scaffolding to engineer other materials, each with new and varied properties and applications.

Kamran M. Khozan explains, "CVMR-Enercarbon combined research efforts are directed towards valuable new products such as graphene interspersed with boron and magnesium to improve its efficiency as a superconductor; or developing very small, flexible flash memories with huge storage capacity, along the same line as what is being developed at École Polytechnique Fédérale de Lausanne (EPFL) in Switzerland."

With graphene offering a large surface area, high electrical conductivity, thinness and strength, it would make a good candidate for the development of fast and efficient bioelectric sensory devices, with the ability to monitor such things as glucose levels, haemoglobin levels, and cholesterol.

Another particular area in which we will soon begin to see graphene used on a commercial scale is in optoelectronics; specifically touchscreens, liquid crystal displays (LCD) and organic light emitting diodes (OLEDs).

Kamran M. Khozan explains that an affiliate corporation of CVMR, M-Power Corporation, is using graphite and graphene to collect energy from the sun, store it and turn it into electricity. "A battery can potentially hold a lot of energy, but it can take a long time to charge. A capacitor, on the other hand, can be charged very quickly, but can't hold that much energy. The solution is to develop energy storage components such as a supercapacitor or a battery that is able to provide both of these positive characteristics without compromise. We are working to enhance the capabilities of lithium ion batteries by incorporating graphene as an anode to offer much higher storage capacity with much better longevity and charge rate."

Graphene could allow water to pass through it, but it is almost completely impervious to many other substances. Its use in water filtration systems and desalination plants is well known and proven to require far less energy than the current systems. Graphene is hydrophobic, but narrow capillaries made of graphene can vigorously suck in water resulting in rapid

permeation. CVMR can now make such capillaries easily and cheaply by piling up layers of graphene oxide. These multilayer nacreous stacks are also mechanically very strong.

Graphene is integrated into plastics such as epoxy to create a material that can replace steel in the structure of aircrafts, improving fuel efficiency, range and reducing weight. Due to its electrical conductivity, it is currently being tested to coat aircraft surface material to prevent electrical damage resulting from lightning strikes. These characteristics can also help in the development of high strength applications such as body armour for military personnel and vehicles.

Other Derivative Products of Captured CO_2

Calcium carbonate-based materials, which are used in variety of applications such as building materials, pharmaceutical and paint industries, can readily be generated from captured CO_2. Diesel and jet fuels are other highly demanding derivative products of CO_2.

The range of products that can be manufactured from captured CO_2 is truly limitless. To turn a harmful substance into a host of useful products is commendable. Corporations such as Enercarbon Inc., CVMR Corporation and M-Power Corporation should be encouraged, and it seems that the strength of the market for their value added products is doing just that.