ZEN Graphene Solutions Provides Research Update

written by Raj Shah | December 8, 2020

December 7, 2020 (Source) – **ZEN Graphene Solutions Ltd.** (TSXV: ZEN) (OTC Pink: ZENYF) ("**ZEN**" or the "**Company**") in partnership with Professor Mohammad Arjmand is pleased to announce the award of a $780,000 Alliance Grant ($480,000 from the Natural Sciences and Engineering Research Council of Canada (NSERC) and $300,000 from a combination of cash and in kind contributions from ZEN). Alliance Grants are awarded through a competitive peer review process, and this proposal, titled "Synthesis of Graphene Nanomaterials and Development of Their Multifunctional Polymer Nanocomposites", is ZEN's highest single monetary grant award from NSERC to date and supports NSERC's growing interest in nanomaterials.

This grant to Dr. Mohammad Arjmand, Canada Research Chair (Tier 2) in Advanced Materials and Polymer Engineering and his Nanomaterials and Polymer Nanocomposites Laboratory (NPNL) will permit the purchase of tensile testing equipment, a freeze dryer, and a differential scanning calorimeter. This new equipment builds on an already impressive research laboratory creating one of the most well-equipped nanomaterials and polymer engineering research labs in Canada (https://npnl.ok.ubc.ca/).

ZEN, in collaboration with Dr. Arjmand's team, has been working on multiple projects, including Graphene Quantum Dot production and applications, Graphene Oxide production, Graphene Oxide/Polyurethane Foam Nanocomposites, and providing technical support for other industrial and university research. ZEN has seen significant progress in all these projects, compelling the company to support this Alliance Grant application.

Dr. Mohammad Arjmand commented, “NPNL is so pleased to work with ZEN to move the boundaries of graphene science and technology. I strongly believe that this Alliance Grant will develop and commercialize graphene nanomaterials and their multifunctional polymer nanocomposites availing Canadian high-tech industries.”

ZEN Head of Research, Dr. Colin van der Kuur commented, “Dr. Arjmand’s lab has demonstrated the ability to understand the demands of industry, and his lab has been instrumental in supporting the technological success we have had in our Guelph lab. I fully expect that this four-year agreement will continue to bring significant innovation to ZEN and will result in the growth of our IP portfolio and business opportunities.”

Leveraging this Alliance Grant, Dr. Arjmand, in collaboration with ZEN, will work on three general themes as follows:

1. Chemical and Electrochemical synthesis of Graphene Quantum Dots with different color emissions targeting a broad spectrum of applications, such as bio-imaging, heavy metals sensing/scavenging, and solar cells. Of note, using a current Mitacs grant with ZEN, Dr. Arjmand’s group has developed a novel technology for the synthesis of Graphene Quantum Dots with Blue Emission, which will be available soon on ZEN’s website.

2. Environmentally friendly chemical/electrochemical synthesis of graphene and chemical remediation of remnant chemicals.

3. Development of molded and 3D printed multifunctional graphene/polymer nanocomposites towards high-tech industries.

About ZEN Graphene Solutions Ltd.

ZEN is a graphene technology solutions company with a focus on the development of graphene-based nanomaterial products and applications. The unique Albany Graphite Project provides the

company with a potential competitive advantage in the graphene market as independent labs in Japan, UK, Israel, USA and Canada have independently demonstrated that ZEN's Albany Pure™ Graphite is an ideal precursor material which easily converts (exfoliates) to graphene, using a variety of mechanical, chemical and electrochemical methods. ZEN is focused on commercializing a patent pending graphene-based coating with 99% viricidal activity against COVID-19.

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To find out more about ZEN Graphene Solutions Ltd., please visit our website at www.ZENGraphene.com. A copy of this news release and all material documents in respect of the Company may be obtained on ZEN's SEDAR profile at www.sedar.ca.

Forward-Looking Statements

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