ZEN Graphene Solutions Announces Collaboration with UBC-O on Department of National Defence Project

written by Raj Shah | June 9, 2020

June 9, 2020 (Source) – **ZEN Graphene Solutions Ltd.** (TSXV: ZEN) ("**ZEN**" or the "**Company**") is pleased to announce it will be commencing a new research collaboration with Prof. Mohammad Arjmand and his team at the University of British Columbia (UBC)-Okanagan Campus, with a $200,000 Department of National Defence (DND) Innovation for Defence Excellence and Security (IDEaS) award. ZEN will be providing in-kind contributions of Albany Pure™ materials and consultation with its technical team.

The goal of this collaborative research project is to develop electrically conductive, molded and 3D printed graphene/polymer nanocomposites as more versatile replacements for metallic electromagnetic shields that are currently in use. The new shields will be lightweight and corrosion resistant along with the additional benefits of low cost, ease of processing and improved design options compared to current metallic shields. In this collaboration, the developed conductive polymer shields will protect sensitive electronic equipment in satellites; however, the shields will also have use in a broad spectrum of applications in various industries, such as information technology, medical sciences, automotive, defence, and aerospace. The technology of developing 3D printing

multifunctional polymer nanocomposite filaments will also allow for the rapid, low-cost fabrication of complex geometries of multifunctional polymer nanocomposites such as artificial electromagnetic shields. If DND elects to advance the project to Phase 2, it will support the research with a $1 million grant.

ZEN would also like to congratulate Prof. Arjmand and his Nanomaterials and Polymer Nanocomposites Laboratory (NPNL) for being awarded two additional grants. The Canada Foundation for Innovation (CFI) John R. Evans Leaders Fund and the British Columbia Knowledge Development Fund (BCKDF) awarded a grant of $320,000 that will allow him to acquire the necessary equipment for the synthesis and characterization of graphene and its polymer nanocomposites. Prof. Arjmand was also awarded an additional $101,224 from the NSERC Research Tools and Instruments (RTI) Grant Program with support from the UBC School of Engineering. These funds will be used to purchase a state-of-the-art extruder to develop polymer nanocomposite filaments and pellets. All this equipment will be used to synthesize and characterize graphene materials from ZEN's Albany Pure™ Graphite and develop novel graphene-based polymer composites.

Francis Dubé, ZEN CEO, commented, "We are happy to see the Department of National Defence investing in graphene-based technologies with the UBCO team led by Prof. Arjmand and ZEN. We are also pleased that Prof. Arjmand and his NPNL center have been recognized with the additional funding from CFI, BCKDF and NSERC. These equipment purchases will help drive graphene innovation in polymers for ZEN."

Prof. Arjmand stated, "Our expertise in the synthesis of graphene, polymer processing, 3D printing, and polymer nanocomposites allows us to develop the next generation of high-performance multifunctional polymer nanocomposites with unique properties and complex geometries. We look forward to continuing

to work with ZEN Graphene to bring these next generation products to market."

About ZEN Graphene Solutions Ltd.

ZEN is an emerging 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.

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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