

ZEN Graphene Solutions Announces Encouraging Aluminum Metal Composite and Coating Results Using ZEN Graphene Material

Thunder Bay, Ontario--(Newsfile Corp. - October 1, 2019) - **ZEN Graphene Solutions Ltd.** (TSXV: ZEN) ("**ZEN**" or the "**Company**") is pleased to announce additional research and development results using a ZEN Graphene additive in a sintered aluminium metal composite and ZEN Graphene in a corrosion-inhibiting coating.

The Company very recently received additional encouraging preliminary results from the University of British Columbia-Okanagan (UBC-O) which has used ZEN's Graphene to enhance the performance of aluminum casting alloys. UBC-O has mixed small volumes of Graphene with an aluminum powder which was then sintered in Spark Plasma Sintering (SPS) equipment. Preliminary results indicate that the Graphene resulted in a significant increase in the electrical conductivity of the material with a relatively small Graphene loading. Dr. Bichler commented: "Aluminum with increased conductivity would have vast industrial applications." Test work will continue to optimize the Graphene loading to optimize the electrical conductivity of the aluminum along with improvements in the thermal and mechanical properties.

Additionally, UBC-O reported encouraging preliminary results on the use of ZEN's Graphene in an epoxy corrosion-inhibiting coating for steel. UBC-O tested four samples of steel: one uncoated, one coated with epoxy only, one coated with an epoxy-graphite mixture, and one with an epoxy-Graphene mixture. The four samples were then exposed to a corrosive, highly saline solution for 10 days after which the level of surface of corrosion was examined and quantified. The following preliminary observations were reported by UBC-O:

- Uncoated steel - 100% of surface corroded
- Epoxy-coated steel - 67% of surface corroded
- Epoxy-graphite mix coated surface - 93% of surface corroded
- Epoxy-Graphene mix coated surface - only 3% of surface corroded

These promising anti-corrosion results from the Epoxy-Graphene mix coated surface will be followed up by additional test work to optimize the Graphene loading in the epoxy resin to potentially develop an anti-corrosion coating application.

Dr. Francis Dubé commented: "We continue to be impressed with the creative research and development work being accomplished at UBC-O. These potential applications could lead to patents and significant markets for the Company. ZEN will continue to support UBC-O as per our 3 year Memorandum of Understanding signed in June of this year."

About ZEN Graphene Solutions Ltd.

ZEN Graphene Solutions Ltd. is an emerging graphene technology company with a focus on development of the unique Albany Graphite Project. This precursor graphene material provides the company with a competitive advantage in the potential graphene market as independent labs in Japan, UK, Israel, USA and Canada have demonstrated that ZEN's Albany Graphite easily converts (exfoliates) to graphene, using a variety of simple mechanical and chemical methods.

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To find out more on 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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