

Imperial Awarded \$90,000 Federal Grant for Scandium Material Research with McMaster University

written by Raj Shah | March 18, 2021

March 18, 2021 ([Source](#)) – Imperial Mining Group Ltd. (“Imperial”) (TSX VENTURE: IPG; OTCQB: IMPNF) is pleased to announce that it has been awarded a Natural Sciences and Engineering Research Council of Canada (NSERC) Alliance Grant for a three-year, \$90,000 research program to investigate scandium-aluminum alloy characterization for use in additive manufacturing (AM), also known as 3-D metal printing, applications.

The grant was jointly awarded to Imperial in partnership with the W. Booth School of Engineering Practice and Technology at McMaster University, Hamilton, Ontario. The program’s objectives are to develop and collect material engineering data for next-generation scandium-enhanced aluminum alloys. The focus of the research program will be on the alloy’s applicability to AM of metal parts for the aerospace, defense and automotive sectors.

“We believe that the Imperial-McMaster University research program will add significant shareholder value by developing new, high-demand, high-value alloy materials and applications for our Crater Lake scandium,” said Peter J. Cashin, Imperial’s President & CEO. “The data collected by this program will enable Imperial to provide reference material in its discussions with defense, aerospace and transportation entities and their downstream suppliers. Strategically, the value-added processing required for 3-D powder will significantly enhance our product

margins. It will also provide us with a catalyst to attract strategic partners in support of Imperial's Crater Lake development activities moving forward."

"McMaster has been at the forefront of developing technical expertise in 3-D printing and we are pleased to work with Imperial Mining Group to optimize scandium-enhanced aluminum alloys," said Dr. M.A. Elbestawi, Research Lead, Additive Manufacturing Group, Faculty of Engineering. "Until recently, broader use of these specialty alloys has been challenged by the lack of a sustainable scandium supply and very high production costs. Imperial as a Canadian sustainable supplier becomes a transformational force which is able to considerably improve the situation. We are eager to begin this important research work as soon as possible."

The current program will aid Imperial's efforts to enhance its scandium market penetration for high-value componentry that uses scandium-aluminum alloys. Imperial believes that the Crater Lake deposit has the potential to accelerate the uptake of this new material for both subtractive and additive manufacturing processes. To further its objectives, Imperial plans to focus on creating new, high-value product applications to build market pull from a variety of consuming sources as it moves towards full production.

ABOUT IMPERIAL MINING GROUP LTD.

Imperial is a Canadian mineral exploration and development company focused on the advancement of its technology metals projects in Québec. Imperial is publicly listed on the TSX Venture Exchange as "IPG" and on the OTCQB Exchange as "IMPNF" and is led by an experienced team of mineral exploration and development professionals with a strong track record of mineral deposit discovery in numerous metal commodities.

ABOUT McMASTER UNIVERSITY'S ADDITIVE MANUFACTURING GROUP

The Additive Manufacturing Group (AMG) was established as a multi-disciplinary research enterprise at McMaster University's Faculty of Engineering in 2015. The AMG is involved in fundamental and applied research and education programs dealing with metal additive manufacturing applications in various industries including: Automotive, Aerospace, Biomedical Devices, and Tooling.

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