

FOR IMMEDIATE RELEASE

Announcing the winner of the Anders Gustaf Ekeberg Tantalum Prize 2019

Brussels, Belgium, September 11th 2019

The Anders Gustaf Ekeberg Tantalum Prize ('Ekeberg Prize'), awarded annually for outstanding contribution to the advancement of the knowledge and understanding of the metallic element tantalum (Ta), has been awarded to Nicolas Soro and his co-authors for the paper 'Evaluation of the mechanical compatibility of additively manufactured porous Ti-25Ta alloy for load-bearing implant applications'.

Announcing the 2019 Ekeberg Prize winner, the independent judging panel stated that in choosing this paper, the panelists took into consideration that the 'advancement of knowledge and understanding of tantalum' should not be restricted to the scientific and research community but also benefit the general public. The application of tantalum containing load-bearing implants, that can significantly improve the quality of life of recipients, was considered to have the greatest potential of all the submissions to enhance the reputation and recognition of the tantalum industry to the public.

Nicolas Soro is studying for his PhD in 'Additive Manufacturing of Porous Metals for Biomedical Applications' within the group of Professor Matthew Dargusch at the Centre for Advanced Materials Processing and Manufacturing of The University of Queensland, Australia (<http://ampam.mechmining.uq.edu.au/>).

On learning of his award, Mr Soro said that he and his colleagues were honoured to receive this prize and pleased to contribute to the field. He explained that the unique set of properties found in tantalum has made it a very attractive biomaterial which has offered new opportunities for biomedical devices and it is an exciting time to be part of this fast-growing environment. "Using 3D-printing technologies, we can tailor the mechanical properties of the biomaterial to those of bones with lattice architectures. The excellent biocompatibility and corrosion resistance of tantalum make it an ideal candidate for the biomedical industry", Mr Soro said.

The panel wishes to congratulate all entrants whose papers are challenging the boundaries of current knowledge of tantalum, and which may well lead to significant breakthroughs into exciting new applications of the element.

The complete list of authors of the winning paper is Nicolas Soro, Hooyar Attar, Martin Veidt and Matthew Dargusch from the Centre for Advanced Materials Processing and Manufacturing (AMPAM) at The University of Queensland, Australia, and Erin Brodie and Andrey Molotnikov from the Department of Materials Science and Engineering at Monash University, Australia. The full paper is available at <https://www.sciencedirect.com/science/article/pii/S1751616119303686?via%3Dihub>

The award is administered by the Tantalum-Niobium International Study Center (T.I.C.), the global trade body representing the tantalum and niobium industry.

The prize and award ceremony

The medal for the Ekeberg Prize has been manufactured from pure tantalum metal by the Kazakhstan Mint and will be awarded at the T.I.C.'s annual conference, the 60th General Assembly, which will be held in Hong Kong, on October 13th to 16th 2019. The T.I.C.'s conference is the largest annual gathering of tantalum and niobium industry leaders, with delegates from every sector of the global industry.

Full details, including a list of those companies already confirmed, are available at <https://www.tanb.org/event-view/60th-general-assembly>.

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About Dr Anders Gustaf Ekeberg

Born in 1767, Anders Gustaf Ekeberg was a Swedish scientist, mathematician, and poet. He became a professor at Uppsala University in 1794 and initially made his name by developing advanced analytical techniques and by proposing Swedish names for the common chemical elements according to the principles set out by the "father of modern chemistry" Antoine-Laurent de Lavoisier. Ekeberg discovered the oxide of tantalum in 1802, isolating it from samples of two different minerals, specifically, tantalite from Kimito, Finland and yttrotantalite from Ytterby, Sweden.

According to Ekeberg's friend, the chemist Jacob Berzelius, Ekeberg chose the name 'tantalum' partly to reflect the difficulties that he had experienced in reacting the new element with common acids and partly out of his passion for ancient Greek literature. Tantalus was a demi-god who killed and cooked his son, Pelops, and as punishment was condemned to stand in a pool of water beneath a fruit tree with low branches, with the fruit ever eluding his grasp, and the water always receding before he could take a drink.

Ekeberg suffered from poor health in later years and in February 1813 he died, unmarried, at the age of 46.

About the Tantalum-Niobium International Study Center (T.I.C.)

Since its inception the Tantalum-Niobium International Study Center (T.I.C. or the Association) has grown and developed to encompass the changing nature of the tantalum and niobium industries and will continue in the same spirit in facing future challenges. After initially focusing on just tantalum, in 1986 niobium joined the association and today our membership represents every aspect of the global tantalum and niobium industries.

The Association:

- An international, non-profit association founded in 1974 under Belgian law.
- Around 90 member companies from over 25 countries involved with all aspects of the tantalum and niobium industry supply chain (including mining, trading, processing, recycling, metal fabrication, capacitor manufacturing, medical...).
- The Association is run by its Executive Committee. This Committee reflects the range of activities of the members and covers the geographic spread of the membership, too. Presidents have been drawn

from all sectors of the industry and from many parts of the world. Elections are held annually.

Objectives:

- Increase awareness and promote the remarkable properties of tantalum and niobium in all their forms.
- Disseminate information on any matter affecting that industry, excluding price and related information and any other proprietary information.
- Address major issues and challenges facing its industry such as conflict minerals legislation, artisanal and small-scale mining (ASM), and the transport of naturally occurring radioactive materials (NORM).
- Organize a General Assembly of the membership in October each year for business and technical presentations. Typically, this includes a field trip to a member company or associated industrial facility.
- Publish a quarterly Bulletin newsletter containing interesting and informative articles about the T.I.C. and the global tantalum and niobium industries.
- Collect statistics from member companies (via an independent company to ensure confidentiality) on tantalum and niobium production, shipments and consumption. Participating members receive quarterly statistics updates.

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