

TANTALUM-NIOBIUM
INTERNATIONAL STUDY CENTER

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TIC

2023 ANNUAL REPORT



Presented at the 64th General Assembly of the
Tantalum-Niobium International Study Center (T.I.C.)

Rio de Janeiro, Brazil, September 10th-13th 2023



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in the responsible sourcing of tantalum



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Partnership for Social & Economic Sustainability

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Contents

| | |
|----|--|
| 4 | President's Welcome |
| 5 | About the T.I.C. |
| 6 | Who is the T.I.C.? |
| 7 | Executive Committee, Subteams and Officers |
| 9 | Presidents of the Association |
| 10 | Executive Marketing Manager's Report 2022-2023 |
| 11 | The Anders Gustaf Ekeberg Tantalum Prize |
| 13 | General Assemblies and Symposia |
| 16 | Speakers' Biographies |
| 20 | Directory of Members |
| 30 | Antitrust Compliance Policy |
| 31 | Applying for T.I.C. Membership |
| 32 | Benefits of T.I.C. Membership |

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

| | |
|---------------|---|
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| Phone: | +32 2 649 51 58 |
| Email: | info@tanb.org |
| Website: | www.TaNb.org |
| Linkedin: | https://be.linkedin.com/company/t.i.c. |
| VAT no.: | BE0414.408.447 |
| Legal status: | The T.I.C. is an AISBL under Belgian law. |

| | |
|----------------|--|
| Legal counsel: | Jones Day 4 Rue de la Régence, 1000 Brussels, Belgium https://www.jonesday.com/brussels/ |
|----------------|--|

| | |
|-------------|---|
| Accountant: | Bofidi Brussels Cantersteen 47, 1000 Brussels, Belgium https://www.bofidi.eu/ |
|-------------|---|

| | |
|----------|---|
| Auditor: | JCB RE Avenue Hermann-Debroux 40-42, 1160 Brussels, Belgium |
|----------|---|

Cover photo credit: T.I.C.

Disclaimer: Tantalum-Niobium International Study Center (T.I.C.) has made every effort to ensure that the information presented is technically correct. However, T.I.C. does not represent or warrant the accuracy of the information contained in the Annual Report or its suitability for any general or specific use. The reader is advised that the material contained herein is for information purposes only; it should not be used or relied upon for any specific or general application without first obtaining competent advice. The T.I.C., its members, staff and consultants specifically disclaim any and all liability or responsibility of any kind for loss, damage, or injury resulting from the use of the information contained in this publication.

President's Welcome

Dear members and friends,

Welcome to beautiful and exciting Rio de Janeiro. This is the third time the T.I.C. has visited Rio; 2001 was the first time and many were not able to travel due to 9/11 travel restrictions. The second time was 2007, and now here we are again in 2023. While this is the third visit for the T.I.C. this is my first. As we say "third time's the charm"...at least for me.

First and foremost, I want to extend a well-deserved and hearty thanks to AMG Brasil S.A. our most generous GA64 Platinum sponsor. AMG has worked with the T.I.C. Meeting Subteam from the beginning to help make certain this GA is a memorable and fun event.

We have put together an excellent set of technical sessions, of which tantalum and niobium are fairly evenly split. We also have two very informative keynotes; one from IBRAM (Brazil Mining Institute), discussing the evolution and future of mining in Brazil, and one from Ernst & Young who put out an annual study on global mining. Both presentations look to be pertinent to where we are as an industry. Additionally, our planned entertainment, during Monday night's Gala Dinner, should be very pleasant and enjoyable.

Brazil is, of course, the global center for niobium mining and production, with CBMM leading the way. That said, as companies look to diversify their sources of tantalum, Brazil is already an important source and aiming to be even more important in the future.

So, let's take this opportunity to enjoy greeting old friends, welcoming new members and friends, and of course take ample time to appreciate the beautiful surroundings and opportunities Rio has to offer.

Please remember to remain vigilant when traveling outside the hotel. Know your surroundings and remain aware. SAFETY FIRST!

As always, I look forward to greeting all of you at the Sunday night reception and during the proceedings.

Sincerest regards,

Daniel F. Persico, Ph.D.

President



About the T.I.C.

Since its founding, the Tantalum-Niobium International Study Center (T.I.C. or 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. 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 80 members from 30 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, whose officials are elected annually by the members. The Committee reflects the range of members' activities and their geographic spread.
- The Committee is led by the President. Presidents have been drawn from all sectors of the industry and from many parts of the world (see page 9).
- The T.I.C.'s office is comprised of the Secretary General, the Executive Marketing Manager, Technical Officer, and several external consultants.

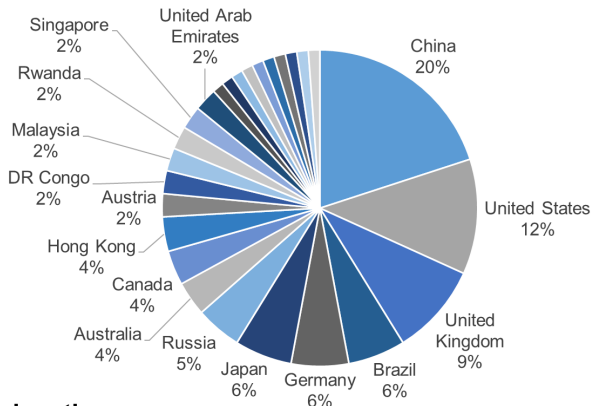
Objectives

- 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, including critical raw material and conflict minerals legislation, artisanal and small-scale mining (ASM) and transporting naturally occurring radioactive materials (NORM).
- Organize a General Assembly of the membership in September or October each year for technical presentations and members' annual general meeting. Often the location is chosen to allow a tour of a member company or industrial facility.
- Publish a quarterly newsletter, the Bulletin, covering interesting and informative articles about the T.I.C. and the global tantalum and niobium industries.
- Collect statistics from member companies (via an independent third-party to ensure confidentiality) on tantalum and niobium production, shipments and consumption. Statistics reports are shared with participating members.

Who is the T.I.C.? *

* This snapshot is based on T.I.C. membership in January 2023

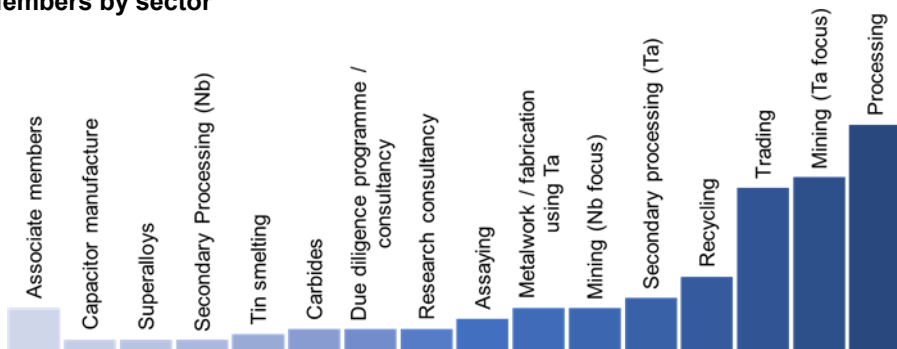
Members by country



Members by location



Members by sector



Executive Committee, Subteams, Officers

Executive Committee

The Executive Committee is drawn from the membership. Committee members may be, but need not also be, the delegates of member companies. The Executive Committee named here was elected by the T.I.C. members at the 63rd General Assembly, and consists of (in alphabetical order of member's surname):

| | |
|----------------------------|---------------------------------|
| Fabiano Costa | fcosta@amg-br.com |
| Silvana Fehling | silvana.fehling@taniobis.com |
| Ronald Gilerman | ronald.gilerman@armerchants.com |
| David Gussack | david@exotech.com |
| Jiang Bin | jiangb_nniec@otic.com.cn |
| Janny Jiang | janny@jiujiangjx.com |
| Dharam Kotecha | dharam@halcyonmetals.com |
| Raveentiran Krishnan | raveentiran@msmelt.com |
| Candida Owens | candida@mtalx.com |
| Daniel Persico (President) | daniel.persico@tanb.org |



The 2022-23 Executive Committee

The 2023 election to the Executive Committee takes place on September 11th during the Association's annual general meeting (AGM) at the 64th General Assembly held in Rio de Janeiro, Brazil. Those elected stand for one year and there is a maximum of twelve members, according to our Charter of association. Members who wish to make nominations to serve on the Executive Committee must do so at least one month before the annual general meeting.

Subteams

Subteams are advisory groups tasked by the Executive Committee with specific projects. In September 2023, the following subteams were operational:

Marketing:

Ronald Gilerman
Robert Marchiando
Ian Margerison
Raveentiran Krishnan
Heather Margerison

Meetings:

Fabiano Costa
David Gussack
Candida Owens
Heather Margerison

Supply Chain:

Silvana Fehling
Ronald Gilerman
Raveentiran Krishnan

Statistics:

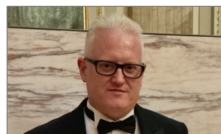
Ian Margerison
Dharam Kotecha
Candida Owens
Silvana Fehling

We are always looking for enthusiastic T.I.C. members to join our range of subteams. If you are interested, please contact Heather Margerison.

Officers of the T.I.C.

At the 64th General Assembly, held in September 2023, the officers were:

| | | |
|------------------------------------|--------------------|--|
| Secretary General | Heather Margerison | heather.margerison@tanb.org |
| Executive Marketing Manager | Ian Margerison | ian.margerison@tanb.org |



The T.I.C. staff team

The T.I.C. also works regularly with several specialist consultants to advance the Association's goals. These include Ulric Schwela (NORM transport), Ally Lam (China) and Breno Rezende (Brazil).

Presidents of the Association

| | |
|------|--|
| 1974 | Cornelius Herkströter, Thaisarco |
| 1975 | Herman Becker-Fluegel, National Resources Trading / Tanco |
| 1976 | Paul Leynen, Zairetain |
| 1977 | Reinhard Deil, GfE |
| 1978 | Joseph Abeles, Kaweck Berylco Industries |
| 1979 | Brian Reynolds, Thaisarco |
| 1980 | George Korinek, Hermann C. Starck Inc. |
| 1981 | Conrad Brown, Fansteel |
| 1982 | John Linden, Greenbushes Tin |
| 1983 | Robert Franklin, STC Components |
| 1984 | Carroll Killen, Sprague Electric Company |
| 1985 | Chikara Hayashi, Vacuum Metallurgical Company |
| 1986 | Rod Tolley, Datuk Keramat Smelting |
| 1987 | Hans-Jürgen Heinrich, GfE |
| 1988 | Harry Stuart, Niobium Products Company |
| 1989 | George Korinek, NRC |
| 1990 | Peter Adams, Thaisarco |
| 1991 | Yoichiro Takekuro, Vacuum Metallurgical Company |
| 1992 | Peter Maden, Vishay Sprague |
| 1993 | Hubert Hutton, Sogem-Afrimet |
| 1994 | Peter Kählert, H.C. Starck GmbH |
| 1995 | Robert Barron, Cabot Performance Materials, David Maguire, KEMET |
| 1996 | Yeap Soon Sit, S.A. Minerals |
| 1997 | William Millman, AVX |
| 1998 | John Linden, Sons of Gwalia |
| 1999 | Charles Culbertson II, KEMET Electronics |
| 2000 | Thomas Odle, Cabot Performance Materials |
| 2001 | Axel Hoppe, H.C. Starck GmbH |
| 2002 | Josef Gerblinger, Epcos |
| 2003 | David Reynolds, KEMET Electronics |
| 2004 | William Millman, AVX |
| 2005 | William Millman, AVX |
| 2006 | Axel Hoppe, H.C. Starck GmbH |
| 2007 | William Young, Cabot |
| 2008 | José Isildo de Vargas, CBMM |
| 2009 | Richard Burt, GraviTa Inc. |
| 2010 | Richard Burt, GraviTa Inc. |
| 2011 | José Isildo de Vargas, CBMM |
| 2012 | Daniel Persico, KEMET Electronics |
| 2013 | Daniel Persico, KEMET Electronics |
| 2014 | David Henderson, Rittenhouse International Resources |
| 2015 | David Henderson, Rittenhouse International Resources |
| 2016 | David Henderson, Rittenhouse International Resources |
| 2017 | John Crawley, Minerals Resources International AG |
| 2018 | John Crawley, Minerals Resources International AG |
| 2019 | Daniel Persico, KEMET Electronics |
| 2020 | Daniel Persico, KEMET Electronics |
| 2021 | Daniel Persico, KEMET Electronics |
| 2022 | Daniel Persico, KEMET Electronics |

Executive Marketing Manager's Report 2022-2023

Dear Members and Stakeholders,

Another year has passed and the T.I.C has been working hard supporting members interests at IAEA (International Atomic Energy Agency) and taking an active part in negotiations with RMI (Responsible Minerals Initiative) and ITSCI (International Tin chain Initiative) to work towards RMI recognition for the ITSCI program.



Ian Margerison

We look forward to the GA64 in Rio de Janeiro, Brazil, a big thank you to AMG for being our hosts and CBMM for the tour of their factory on the Wednesday.

Also, we say a sad farewell to Ms Emma Wickens and welcome to Mrs Heather Margerison, the new T.I.C. Secretary General. A person who I know well.

Since our 63rd General Assembly held in Geneva, Switzerland, October 2022, this association has continued to invest in more industry-led projects. The Executive Committee has supported this year's activities of the EMM, and we say a happy retirement to Mr Raveentiran Krishnan from MSC and thank you for your years of service on the ExCom.

Warmest regards,

Ian.

Tarantula project

The T.I.C. is part of a consortium of 16 organisations to be awarded funding to study innovative new ways to recover niobium (Nb), tantalum (Ta) and tungsten (W) from mine by-products and processing waste streams, materials which are currently considered to be uneconomical. Full details will be reported in future Bulletins and during our 64th General Assembly in Brazil.



tarantula The T.I.C. is part of a consortium studying innovative new ways to recover niobium (Nb), tantalum (Ta) and tungsten (W) from mine by-products and processing waste streams, materials which are currently uneconomical.

| | | |
|---------------------|----------------------|---------------------|
| 41 Nb niobium | 73 Ta tantalum | 74 W tungsten |
|---------------------|----------------------|---------------------|

If you are interested in learning more about this project visit <https://h2020-tarantula.eu/> or to register your interest contact the T.I.C. at info@tanb.org. *The TARANTULA project has received funding from the European Union's EU Framework Programme for Research and Innovation Horizon 2020 under Grant Agreement No 821159.*



The Anders Gustaf Ekeberg Tantalum Prize

In 2018 the T.I.C. established an annual science award to recognise excellence in tantalum research and innovation, as part of our aim to increase awareness of the many unique properties of tantalum products and the applications in which they excel*.

It was named the Anders Gustaf Ekeberg Tantalum Prize ('Ekeberg Prize') in honour of the Swedish chemist who discovered tantalum in 1802. The medal, made by the Kazakhstan Mint from pure tantalum metal, is awarded to the lead author of the winning publication at our General Assembly each year.



The shortlist

This year there were five publications shortlisted for the prize, showing the great versatility of tantalum. The subjects covered by the shortlisted publications included additive manufacturing, thermal actuators, chemical processing and thin film. Full details and links to all shortlisted publications can be found at www.tanb.org/view/prize.

The judging procedure

The shortlist is judged by an independent panel of experts who have been selected from around the world to provide an impartial assessment on the technical merit of the shortlisted papers. The T.I.C. acts as secretariat to the Ekeberg Prize but is not involved in the judging process.

In 2023 the T.I.C. was privileged to have on the panel (alphabetical by surname):

- **Dr Axel Hoppe**, Commerce Resources / consultant, Canada / Germany (Chair)
- **Professor Elizabeth Dickey**, North Carolina State University, United States
- **Magnus Ericsson**, Luleå University of Technology, Sweden
- **Dr Nedal Nassar**, U.S. Geological Survey (USGS), United States
- **Professor Toru Okabe**, The University of Tokyo, Japan
- **Tomáš Zedníček** Ph.D., European Passive Components Institute (EPCI), Czech Republic

* Although the T.I.C. represents and supports both tantalum and niobium equally, the Ekeberg Prize will focus only on tantalum, but this is only because CBMM's Charles Hatchett Award (www.charles-hatchett.com) already does an excellent job of recognising niobium published research.

The 2023 winning publication

The 2023 Anders Gustaf Ekeberg Tantalum Prize ('Ekeberg Prize') was awarded to a multi-national team led by Dr Wieizmann team, for its paper "Tailoring a speciality alloy for Additive Manufacturing: From powder production to parameter optimisation" published in Powder Metallurgy Review, Autumn 2022 by Inovar Communications Ltd (reprinted in the T.I.C. Bulletin number 191, published in October 2023 and available at www.TaNb.org).

The judges' verdict

Announcing the winner Dr Axel Hoppe stated 'I award this year's Ekeberg Prize, to Dr Wieizmann's team at TANIOBIS GmbH & Alloyed Ltd for 'Tailoring a speciality alloy for Additive Manufacturing: From powder production to parameter optimisation'.

Reasons for the vote: key technology for reducing cost, opening new markets for Ta/Nb, and demonstrates practical outcome and readiness for mass production.

The winning team

On receiving the Ekeberg Prize, Dr Weizmann said, "Thank you for this wonderful award, which is an exceptional honour of our work. It will be a great honour for the team to accept the Anders Gustaf Ekeberg Tantalum Prize in Rio and give a scientific presentation".

The T.I.C. 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 authors of the winning paper are:

Dr Markus Weizmann, Senior Scientist, Taniobis GmbH

Dr Shaumik Lenka, Materials Design Engineer, Alloyed Ltd

Dr David Crudden, Director of Alloy Development, Alloyed Ltd

Dr André Németh, Director of Group Synergy, Taniobis GmbH

Dr Melanie Stenzel, Director of Marketing, Taniobis GmbH

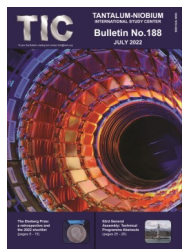
General Assemblies and Symposia

| <i>General Assembly Symposium</i> | <i>Month and year</i> | <i>City and country</i> |
|---------------------------------------|-----------------------|-------------------------------------|
| 1st | March 1974 | Brussels, Belgium |
| 2nd | September 1974 | Brussels, Belgium |
| 3rd | March 1975 | Brussels, Belgium |
| 4th | September 1975 | Brussels, Belgium |
| 5th | March 1976 | Brussels, Belgium |
| 6th | October 1976 | Brussels, Belgium |
| 7th | May 1977 | Winnipeg, MB, Canada |
| 8th | October 1977 | Brussels, Belgium |
| 9th 1st | May 1978 | Nürnberg, West Germany |
| 10th | October 1978 | Brussels, Belgium |
| 11th | May 1979 | Perth, WA, Australia |
| 12th | October 1979 | Brussels, Belgium |
| 13th | May 1980 | Torquay, United Kingdom |
| 14th | October 1980 | Brussels, Belgium |
| 15th | May 1981 | Goslar / Bad Harzburg, West Germany |
| 16th | October 1981 | Brussels, Belgium |
| 17th | June 1982 | Tulsa, OK, United States |
| 18th | October 1982 | Brussels, Belgium |
| 19th | May 1983 | Penang, Malaysia |
| 20th | November 1983 | Brussels, Belgium |
| 21st | June 1984 | Stockholm, Sweden |
| 22nd | October 1984 | Brussels, Belgium |
| 23rd | June 1985 | Boston, MA, United States |
| 24th | October 1985 | Brussels, Belgium |
| 25th | May 1986 | Kobe, Japan |
| 26th | October 1986 | Brussels, Belgium |
| 27th | June 1987 | Rio de Janeiro, Brazil |
| 28th | October 1987 | Brussels, Belgium |
| 29th 2nd | November 1988 | Orlando, FL, United States |
| 30th | October 1989 | Frankfurt, Germany |
| 31st | November 1990 | Perth, WA, Australia |
| 32nd | October 1991 | Philadelphia, PA, United States |
| 33rd | November 1992 | Phuket, Thailand |
| 34th | October 1993 | Vienna, Austria |
| 35th | October 1994 | Aizu-Wakamatsu, Japan |
| 36th 3rd | September 1995 | Goslar, Germany |
| 37th | October 1996 | Greenville, SC, United States |
| 38th | October 1997 | Xian, Shaanxi, China |
| 39th | October 1998 | Prague, Czech Republic |
| 40th | October 1999 | Perth, WA, Australia |
| 41st 4th | October 2000 | San Francisco, CA, United States |
| 42nd | October 2001 | Rio de Janeiro, Brazil |

| | | |
|----------|----------------|---------------------------------|
| 43rd | October 2002 | Kyoto, Japan |
| 44th | October 2003 | Lisbon, Portugal |
| 45th | October 2004 | Philadelphia, PA, United States |
| 46th 5th | October 2005 | Pattaya, Thailand |
| 47th | October 2006 | Innsbruck, Austria |
| 48th | October 2007 | Rio de Janeiro, Brazil |
| 49th | October 2008 | Shanghai, China |
| 50th | October 2009 | Tallinn, Estonia |
| 51st | October 2010 | Lake Tahoe, NV, United States |
| 52nd | October 2011 | Almaty, Kazakhstan |
| 53rd 6th | October 2012 | Cape Town, South Africa |
| 54th | October 2013 | York, United Kingdom |
| 55th | October 2014 | New York, NY, United States |
| 56th | October 2015 | Penang, Malaysia |
| 57th | October 2016 | Toulouse, France |
| 58th 7th | October 2017 | Vancouver, BC, Canada |
| 59th | October 2018 | Kigali, Rwanda |
| 60th | October 2019 | Hong Kong SAR, China |
| 61st | October 2020 | online |
| 62nd | November 2021 | London, UK |
| 63rd | October 2022 | Geneva, Switzerland |
| 64th | September 2023 | Rio de Janeiro, Brazil |

Join our mailing list to receive the Bulletin by email, free each quarter

Our mission with the Bulletin is to provide the global tantalum and niobium community with news, information and updates on our work. We hope you enjoy reading it! Recipients will also receive messages about the T.I.C. and our General Assemblies. Email info@tanb.org to join our mailing list and keep up to date with the T.I.C.



The full archive of Bulletins, including Bulletin Reviews, is available at TaNb.org.

T.I.C.'s 65th General Assembly

SAVE THE DATES



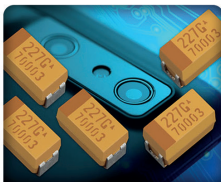
(Conference and AGM) will take place in

Tokyo

September 8th-11th 2024

Non-members are welcome to attend this event. The T.I.C. General Assembly attracts global industry leaders. Full details will be made available at www.tanb.org

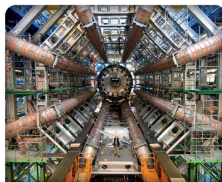
Our 2024 conference will explore issues such as:



Capacitors



Superalloys



Superconductors



HSLA Steel

TIC

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www.TaNb.org

Speakers' Biographies

Biographies are of the lead author of presentations and panellists (alphabetical by surname)

Dr Rafael Agnelli Mesquita: Chief Technology Officer, CBMM

Leading the Global Niobium Supply Chain



Dr Rafael Agnelli Mesquita holds a PhD in Materials Science and Engineering from São Carlos Federal University, Brazil, with Post-Doctoral Research conducted at the Massachusetts Institute of Technology. Most of his career has been dedicated to the development and application of advanced materials, remarkably alloyed steels, focused on the connection between product characteristics and market success. As far as experience, Rafael Mesquita worked initially for 10 years in R&D in Industry and 4 years as a private consultant together with a professor assignment in Brazilian universities and lecturer at Upper Austria University of Applied Sciences. Later, he worked for 2 and 1/2 years as Director of Marketing and Technology at Villares Metas (voestalpine Edelstahl long products branch in Brazil). To date, Rafael Mesquita has published approximately 150 papers, developed 10 product patents and published 2 books with American publishers relating to the materials technology industry. He started working at CBMM in 2014 as a technical consultant for North America and in 2019 took the Technology team worldwide. Since 2021, Rafael Mesquita has been CBMM's Director of Technology.

João Brito, Value Chain Integration Leader for Mining & Metals/Partner, Ernst & Young

Top 10 Business Risks and Opportunities in Mining and Metals in 2023

João Brito is an expert in value chain optimization with focus on Energy & Natural Resource sectors. He has 15 years of experience leading major transformations in fields such as operational efficiency, integrated operations center, planning and technical services applied to heavy asset industries. João Brito holds a degree in Industrial Engineering from Escola Politécnica da USP and a Master in Mining Engineering & Mineral Resources from Colorado School of Mines.

Jochen Flinspach, AMG/ALD Vacuum Technologies

Electron Beam Melting of Tantalum, Niobium, and Tungsten



Mr Flinspach graduated as a chemical process engineer from the University of Stuttgart. After 2 years as a process engineer at Degussa, he started his career at ALD Vacuum Technologies GmbH for 3 years in the field of vacuum-thermal recycling, then switched to electron beam technology and one year later took over responsibility for the toll melting operation at the ALD inhouse furnace. With the experience and knowledge from more than 20 years of electron beam melting operation he supports the sales and design of new equipment and performs process commissioning of electron beam melting equipment worldwide.

Linghiu Du, Shaanxi Unique Rare Metal Materials Co. Ltd.

Tantalum – Niobium Lead Wire Composite



General Manager: Shaanxi Unique Rare Metal Materials Co., Ltd. (03/2023–Present)

Director: Tantalum & Niobium Mill Plant, OTIC, China (2018–2021)

Director: Targets Institute, Northwest Rare Metal Materials Institute, China (2015–2018) General Manager: Sawing Wire Branch Company, OTIC, China (2012–2015)

Visiting Scholar: College of Material Engineering, University of Kentucky (2009)

Deputy Director/Engineer: Tantalum Wire Plant, OTIC, China (1996–2011)

Robert D. Marchiando, Materion



Niobium Superconductors

Renzo has collaborated with companies throughout the electronics supply chain for the past 22 years. From material suppliers to device and equipment makers, Renzo has advised clients on the commercial impact of new technologies and emerging markets within the electronics industry. Projects have spanned across a variety of sectors, from consumer-related markets to the defence businesses. Renzo has experience in several technology sectors including semiconductors, passives, interconnects, and MEMs devices. He has developed subject matter expertise in several areas including RF, machine learning, and power electronics.

Mr Ian Margerison, Tantalum-Niobium International Study Center (T.I.C.)

Resources



Past and Future T.I.C. statistics

Ian Margerison has been in the tantalum industry for 25 years and started his journey with AVX tantalum division in Paignton, UK. Initially he was the lead development engineer for the niobium oxide capacitors and worked on the highest CV/g tantalum powders in the world's smallest tantalum capacitors (TAC). Subsequently he then spent over a decade at Metalysis, a University of Cambridge start-up company based in the UK, where he built up the tantalum capacitor grade production line, before turning to focus on commercialising the Cambridge FFC product lines in superalloys, high entropy alloys and specialist titanium alloys. Previously, Ian has been a member of the T.I.C. Executive Committee and chaired the Marketing Subteam. Ian joined the T.I.C. staff in October 2021.

Dr Andrew Matheson, Ximei Resources



Prospects for greatly increased tantalum supply on the back of the electrification of transportation

Andrew Matheson has worked in the tantalum and niobium industry since 1997, when he served as Director of Raw Materials and Business Development at Cabot Corporation. He has held roles in R&D, mineral development, business development and sales. Today he provides commercial and strategic support to Ximei Group's international business.

Julio Nery, Director of Sustainability, IBRAM (Brazil Mining Association)



Brazil Mining Industry: Yesterday, Today and Tomorrow

Graduated in Mining Engineering from the Federal University of Minas Gerais (UFMG, 1978), he has 43 years of experience in the areas of Environment, Mine Planning and Operations in several mining companies. In his professional experience, he worked for 25 years at Minerações Brasileiras Reunidas (MBR), including the roles of General Manager of Operational Planning (1991 to 1998) and Pico Complex (1998/2005). In addition, he worked in the areas of environmental licensing and institutional relations at Vale S.A. (2008/2012), he was Director of Operations at CADAM/PPSA (2005/2008), kaolin mining in the Amazon and at Crusader do Brasil, leading iron ore operation in Minas Gerais and gold mine projects in Mato Grosso and Rio Grande do Norte State. In addition to being former President of the Brazilian Commission for Resources and Reserves, CBRR. He also represents IBRAM in the Environmental Council of Minas Gerais state and Fertilizers Council at ministry of mines and energy. He is member of the Technical council of CETEM – Centro de Tecnologia Mineral, in Rio de Janeiro.

Erik Sardain, Project Blue



Vanadium vs. Niobium

Erik has over 25 years of experience in the commodity space, with managerial positions in the finance and the mining industry. Prior joining Project Blue, Erik was Principal Consultant at Roskill, covering steel, iron ore and steel alloys, primarily vanadium and niobium. Before that Erik was Head of Global Research and analysis for iron ore at BHP in Singapore with a focus on market intelligence, project management and strategy. Erik has also worked as Investment Analyst and Portfolio Manager for major financial institutions in Europe, Asia, and North America, focusing on natural resources and commodities. He has spent more than fifteen years in Asia and has been involved in many projects in China, India, and Southeast Asia. Erik has a Master's degree in economics from the University of Geneva, Switzerland, and a Master's Degree in International Politics from the Graduate Institute of International and Development Studies of Geneva, Switzerland.

Scott Shoppell, Fort Wayne Metals



Tantalum Wire for Medical Applications

Scott Shoppell is the Sales and Marketing Manager of the Advanced Materials Development Division of Fort Wayne Metals, along with overseeing commercial activity for our non-medical markets. Scott joined Fort Wayne Metals in 1993. He has served in various roles over the last 29 years, including Wiredrawer, Customer Service Associate, Product Manager and Marketing Manager before taking the role of Sales and Marketing Manager at our Advanced Materials Development Division in Columbia City, IN. Scott graduated from Purdue University in 2000 with a Bachelor of Science Degree in Organizational Leadership and Supervision, followed by a Master of Business Administration from Indiana Wesleyan University in 2009.

Chen Xueqing, OTIC (Ningxia Orient Tantalum Industry Co. Ltd.)



High Purity Tantalum Sputtering Targets

Chen Xueqing, Master Degree of Engineering, Senior Engineer, currently serves as the Technical Deputy Factory Manager of Tantalum Powder Branch of CNNMC Orient Group Co., Ltd. He has been engaged in the production, research and development of tantalum powder for capacitor, metallurgical grade and high-purity tantalum powder for over 20 years. He has received various honours at the national and provincial levels, and has participated in the revision of many national industry standards.

Patricia Procópio, Women in Mining - Brasil

Brazil Women in Mining: An Overview

TBC



Critical Minerals



Special Materials

Critical Minerals

- Feldspar
- Spodumene Concentrate
- Tantalum Concentrate
- Tin Ingots

Special Materials

- Tantalum Oxide
- Niobium Oxide
- Grain Refiners
- Specialty Aluminum Alloys
 - Aluminum Master Alloys
 - Aluminum Strontium
 - Aluminum Boron
 - Zirconium Aluminum
- Mechanical Aluminum Alloys and Deoxidant
- ALTAB
- Chemicals
 - Potassium Aluminium Fluoride
 - Salts

Meet **AMG Brasil** at the 64th General Assembly of The Tantalum-Niobium International Study Center (T.I.C.), Brasil 2023

AMG Brasil are committed to producing materials of certified origin to the maximum quality for the global market.

The business operates in three segments: Critical Minerals, Special Materials and Energy.

Directory of Members

Status August 2023

A&R Merchants

Address: 2101 NW 93rd Avenue, Doral FL 33172, United States
Email: ronald.gilerman@armerchants.com
Website: www.armerchants.com
Activity: Recycling, Trading

Advanced Alloy Services Ltd

Address: Nobel Way, Dinnington, Sheffield S25 3QH, United Kingdom
Email: shall@advancedalloys.co.uk
Website: www.advancedalloys.co.uk
Activity: Trading

Advanced Material Japan Corp.

Address: Sanno park Tower 12F, 2-11-1 Nagata-cho, Chiyoda-ku, Tokyo 100-6112, Japan
Email: dkawamata@amjc.co.jp
Website: www.amjc.co.jp/en
Activity: Trading

Advanced Metallurgical Group N.V. (AMG)

Address: Building 200, 435 Devon Park Drive, Wayne, PA 19087, United States
Email: fcosta@amg-br.com
Website: www.amg-nv.com
Activity: Mining, Processing

Alfred H. Knight International Ltd

Address: Pegasus House, Kings Business Park, Prescot, Knowsley, L34 1PJ, United Kingdom
Email: paul.chew@ahkgroup.com
Website: www.ahkgroup.com
Activity: Assaying

Argus Media Ltd

Address: Lacon House, 84 Theobald's Road, London WC1X 8NL, United Kingdom
Email: london@argusmedia.com
Website: www.argusmedia.com
Activity: Research and Consultancy

AS International Corporation Ltd

Address: Unit 2b, Olympic Way, Sefton Business Park, Liverpool L30 1RD, United Kingdom
Email: Secretary@alexstewartinternational.com
Website: www.alexstewartinternational.com
Activity: Analytical, sampling and inspection services

Australian Strategic Materials Ltd

Address: Level 4 , 66 Kings Park Road, West Perth, WA 6005, Australia
Email: Marketing@asm-au.com
Website: www.asm-au.com
Activity: Nb Mining, Processing

Auxico Resources Canada Inc.

Address: 201 Notre Dame West, Suite 500, Montreal QC, H2Y 1T4, Canada

Email: christoph.ebeling@camet.ch

Website: www.auxicoresources.com

Activity: Mining

B.W. Minerals (s) Pte Ltd

Address: 50 Raffles Place, Level 30, Singapore Land Tower, Singapore 048623, Singapore

Email: bwminerals@bwm.com.sg

Website: www.hhezhang.com

Activity: Trading

Buss & Buss Spezialmetalle GmbH

Address: Sassnitzer Straße 10, 18551 Sagard, Germany

Email: buss@buss-spezialmetalle.de

Website: <https://www.buss-spezialmetalle.de>

Activity: Recycling

CBMM

Address: Avenida das Nações Unidas, 12.901, 23º andar, Torre Oeste, Brooklin Novo, São Paulo, 04578-910, Brazil

Email: Isadora.costa@cbmm.com

Website: www.cbmm.com

Activity: Nb Mining, Processing

Central America Nickel Inc.

Address: 201 Notre Dame West, Suite 500, Montreal QC, H2Y 1T4, Canada

Email: christian.falk@camet.ch

Website: www.centralamericanickeluaex.com

Activity: Mining

Chemaf Resources Limited

Address: 30th Floor, Almas Tower, Jumeirah Lake Towers, P.O. Box 340575, Dubai, United Arab Emirates

Email: uday.shetty@chemaf.com

Website: www.chemaf.com

Activity: Mining

Chemaf SA

Address: 144 Avenue Usoké, C/Kampemba, Lubumbashi, Democratic Republic of Congo

Email: shiraz@chemaf.com

Website: www.chemaf.com

Activity: Mining

D Block Metals LLC

Address: 1111 Jenkins Road, Gastonia, NC 29052, United States

Email: craig@dblockmetals.com

Website: www.dblockmetals.com

Activity: Recycling

Duoluoshan Sapphire Rare Metal Co. Ltd of Zhaoqing

Address: No. 83, South of Sihui Avenue, Sihui City, Guangdong, 526200, China

Email: dlsnsy@aliyun.com, dls_purchase@163.com

Website: www.zqdl.com

Activity: Processing

EcoWhite Trading Ltda

Address: Rua Barretos 1191, Vila Elisa, Ribeirão Preto, SP 14075-000, Brazil

Email: gerencia@ecowhite.com.br

Website: www.ecowhite.com.br/en

Activity: Mining, Processing, Recycling

Elite Material Solutions Limited

Address: 17 Hayman Rise, Grange Farm, Milton Keynes, Buckinghamshire, MK8 0ND, United Kingdom

Email: dalegwinnutt@elitematerial.com

Website: www.elitematerial.com

Activity: Design and manufacture of Ta components and equipment

Exotech, Inc.

Address: 1851 Blount Road, Pompano Beach, FL 33069, United States

Email: exotech@exotech.com

Website: www.exotech.com

Activity: Recycling

F&X Electro-Materials Ltd

Address: Yaxi Industrial Development Zone, Xinhui City, Guangdong 529152, China

Email: xyz@uil.com.hk

Website: www.fxselectro.com

Activity: Processing

FIR Metals & Resource Ltd

Address: Jiulong Industrial Zone, Yanling, Zhuzhou, Hunan 412500, China

Email: tang396919@hotmail.com

Website: en.chinatanb.com

Activity: Processing

Globe Metals & Mining Ltd

Address: Unit 1, 26 Elliott Street, Midvale, WA 6056, Australia

Email: gh@globemm.com

Website: www.globemm.com

Activity: Nb Mining

Guangdong Rising Rare Metals-EO Materials Ltd

Address: 2 Kaifa Avenue, South District, Qingyuan Huaqiao Industrial Park, Yingde, Guangdong Province, 511500, China

Email: zh_ctns@126.com

Website: www.gsxc723.com

Activity: Processing

Halcyon Inc.

Address: Mazaya Business Avenue AA1, Level 41, Jumeirah Lake Towers Embankment, P.O. Box 214745, Dubai, United Arab Emirates

Email: admin@halcyonmetals.com

Website: www.halcyonmetals.com

Activity: Trading

International Conference on the Great Lakes Region (ICGLR)

Address: Boulevard du Japon 38, B.P. 7076, Bujumbura, Burundi

Email: secretariat@icglr.org

Website: www.icglr.org

Activity: Associate Member/Trade association

Associate

Jiangxi Tuo Hong New Material Co., Ltd

Address: No.3 Chunyi Road, Economic Development Zone, Yichun, Jiangxi 336000, China

Email: jxthxc@sina.com

Website: www.jxthxc.com

Activity: Processing

Jiujiang Fuxing Tai Trade Co. Ltd

Address: Room 1002, building A, North Area, Lu Feng Xiao Qu, Jiujiang, Jiangxi 332000, China

Email: jiujiangfuxingtai@vip.163.com

Website: www.jjfx.com

Activity: Trading

Jiujiang Jinxin Non-ferrous Metals Co. Ltd

Address: No. 3 Industrial Zone, Xunyang District, Jiujiang City, Jiangxi Province, China

Email: janny@jiujiangjx.com

Website: www.jiujiangjx.com

Activity: Processing

Jiujiang Tanbre Co., Ltd

Address: No. 62 Jiuhu Road, Jiujiang City, Jiangxi Province 332014, China

Email: import@jjtanbre.com.cn

Website: www.jjtanbre.com.cn/english

Activity: Processing

Jiujiang Zhongao Tantalum & Niobium Co. Ltd

Address: 801 East Binjiang Road, Jiujiang City, Jiangxi Province, China

Email: tonyzatanb@qq.com

Website: www.zatanb.com

Activity: Processing

KEMET Electronics Corp.

Address: KEMET Tower, 1 East Broward Blvd, 2nd floor, Fort Lauderdale, FL 33301, United States
Email: Kemet.communications@yageo.com
Website: www.kemet.com
Activity: Capacitor Manufacture, Processing

Krome Commodities Limited

Address: 23 Ashburton Avenue, Ilford, Essex IG3 9ET, United Kingdom
Email: psmony48@gmail.com
Website: www.kromecommodities.com
Activity: Trading

Malaysia Smelting Corporation

Address: 27 Jalan Pantai, 12000 Butterworth, Malaysia
Email: msc@msmelt.com
Website: www.msmelt.com
Activity: Tin Smelting

Materion Newton Inc.

Address: 45 Industrial Place, Newton, MA 02461, United States
Email: Robert.marchiando@materion.com
Website: www.materion.com
Activity: Secondary Processing

MERSEN Deutschland Linsengericht GmbH

Address: Lagerhausstrasse 7-9, 63589 Linsengericht, Germany
Email: tobias.schnurpfeil@mersen.com
Website: www.mersen.com
Activity: Design and manufacture of Ta components and equipment

Metal Do Co. Ltd

Address: ONTEX Namba Bld. 11F, 2-2-45, Minatomachi, Naniwa-ku, Osaka 556-0017, Japan
Email: metaldo@raremetal.co.jp
Website: www.raremetal.co.jp/en
Activity: Trading

Metalink International Co. Ltd

Address: Metalink Building, 8 East Jinxin Road, Jiangjun Avenue, Jiangning Economic Development Area, Nanjing, 211153, China
Email: mabuyang@metalink.com.cn
Website: www.metalink.com.cn/en
Activity: Ore processing, Pure metals refining, Master alloys, Special alloys, Recycling

Metallurgical Products India Pvt. Ltd

Address: T-27, MIDC Industrial Area – Talaja, District Raigad, Maharashtra 410208, India
Email: vkumar@mpil.co.in
Website: www.mpil.co.in
Activity: Processing

Metherma KG

Address: Arnheimerstrasse 109, 40489 Düsseldorf, Germany
Email: molybdenum@metherma.de
Website: www.metherma.de
Activity: Recycling, Trading

Mines, Minerals, Metals & Markets Ltd

Address: 229 Dartmouth Road, Paignton, Devon, TQ4 6LG, United Kingdom
Email: w.millman@minesmineralsmetalsmarkets.com
Website: n/a
Activity: Due diligence consultancy

Mining Minerals Resources Sarl

Address: 588 Route de Kipushi, Commune Annexe, Lubumbashi, Democratic Republic of Congo
Email: geoffrey@somika.com
Website: n/a
Activity: Mining

Minor Metals Trade Association (MMTA)

Address: 3-4 Bower Terrace, Tonbridge Road, Maidstone, Kent ME16 8RY, United Kingdom
Email: freya@mmta.co.uk
Website: www.mmta.co.uk
Activity: Associate Member/Trade association

Associate

MinTerra FZE

Address: P2-ELOB Office No. E-30F-11, Hamriyah Free Zone, P.O. BOX No. 50678, Sharjah, United Arab Emirate
Email: trading@minterra.ae
Website: www.minterra.ae
Activity: Trading

Mitsui Mining & Smelting Co. Ltd

Address: Gate City Ohsaki West Tower, 19th floor, 1-11-1 Osaki, Shinagawa-ku, Tokyo, 141-8584, Japan
Email: k_kawana@mitsui-kinzoku.com
Website: www.mitsui-kinzoku.com/en
Activity: Processing

MTALX Ltd

Address: 166 Hampstead Way, London NW11 7YE, United Kingdom
Email: candida@mtalx.com
Website: www.mtalx.com
Activity: Trading

MTU Aero Engines AG

Address: Dachauerstrasse 665, 80995 München, Germany
Email: Dominik.PITZ@mtu.de
Website: www.mtu.de/en
Activity: Aerospace Alloys, User

Ningxia Orient Tantalum Industry Co., Ltd

Address: 119 Yejin Road, Dawukou District, Shizuishan City, Ningxia 753000, China
Email: jiangb_nniec@otic.com.cn
Website: www.otic.com.cn
Activity: Processing

NPM Silmet OÜ

Address: Keskstr 2, 40231 Sillamäe, Estonia
Email: j.ignatova@neomaterials.com
Website: www.neomaterials.com
Activity: Processing

Orano Nuclear Packages and Services

Address: 23 place de Wicklow, F-78180 Montigny-Le-Bretonneux
Email: lucie.de-araujo@orano.group
Website: www.orano.group/en/nuclear-expertise/comprehensive-range-of-services/transporting-and-storing-nuclear-material
Activity: Transport

Plansee SE

Address: Metallwerk-Plansee-Str. 71, 6600 Reutte, Austria
Email: Sandra.Horninger@plansee.com
Website: www.plansee.com
Activity: Secondary Processing

Power Resources International Ltd

Address: Amelia House, Crescent Road, Worthing, West Sussex, BN11 1QR, United Kingdom
Email: ray.power@pwr.ltd
Website: www.pwr.ltd
Activity: Mining

RC Inspection Metals B.V.

Address: Gustoweg 66, 3029 AS Rotterdam, Netherlands
Email: info@rc-inspection.com
Website: www.rc-inspection.com/
Activity: Assaying

Refractory Metals Mining Co. Ltd

Address: West Wing, 2/F, 822 Lai Chi Kok Road, Cheung Sha Wan, Kowloon, Hong Kong
Email: info@rmmc.com.hk
Website: n/a
Activity: Mining, Trading

Resind Indústria e Comércio Ltda

Address: Rodovia 265 Km 264, Distrito Industrial, Caixa Postal 157, São João del Rei, MG 36315-000, Brazil
Email: almirclemente@resind.com.br
Website: www.resind.com.br
Activity: Secondary Processing

Responsible Minerals Initiative (RMI)

Address: 1725 Duke St, Suite 300, Alexandria, VA 22314, United States
Email: msmirnova@responsiblebusiness.org
Website: www.responsiblemineralsinitiative.org
Activity: Associate Member/Trade association

Associate

RFH Recycling Metals Co. Ltd

Address: 1507 Huijie Plaza, NO.268 Zhongshan Road, Nanjing 210008, China
Email: liu_ming@rfh-metals.com
Website: www.rfh-metals.com
Activity: Processing

Rwanda Mines, Petroleum and Gas Board (RMB)

Address: KN 4 Ave, Kigali, Rwanda
Email: yamina.karitanyi@rmb.gov.rw
Website: www.rmb.gov.rw
Activity: Associate Member/Trade association

Associate

Rwanda Mining Association (RMA)

Address: P.O. Box 1856, Kigali, Rwanda
Email: jeanmalic@yahoo.fr
Website: rma.org.rw
Activity: Associate Member/Trade association

Associate

SAMWOOD NEO Inc.

Address: 3F, No.3 Hayakawa Bldg, 2-2, Kandatacho, Chiyoda-ku, Tokyo, Japan
Email: satomi@sw-neo.com
Website: sw-neo.com
Activity: Recycling, Trading

Specialty Metals Resources Ltd

Address: Room 3602, China Resources Building, 26 Harbour Road, Wanchai, Hong Kong
Email: Ximena.Rodriguez@smr.hk
Website: www.smr.hk
Activity: Trading

Stapleford Minerals and Metals Limited

Address: Wayside, Stapleford Road, Stapleford Abbots, Romford, Essex RM4 1EJ, United Kingdom
Email: jim@staplefordtrading.co.uk
Website: www.staplefordminmet.co.uk
Activity: Trading

Strategic Minerals Spain

Address: Calle Castelló nº 117, planta 5, puerta 33, oficina 533-536, 28006 Madrid, Spain
Email: eterron@strategicminerals.com
Website: www.strategicminerals.com
Activity: Mining

TAM International LP

Address: 1020-606 Spadina Cr. E, Saskatoon, SK S7K 3H1, Canada
Email: kevin.loyens@tamintl.ca
Website: tamintl.ca
Activity: NORM transportation, packaging, and handling

TANIOBIS GmbH

Address: Im Schleeke 78-91, 38642 Goslar, Germany
Email: silvana.fehling@taniobis.com
Website: www.taniobis.com
Activity: Processing

Tantec GmbH

Address: Tantalstraße 1-3, 63571 Gelnhäusen, Germany
Email: g.raab@tantec-group.com
Website: www.tantec-group.com
Activity: Design and manufacture of Ta components and equipment

Telex Metals LLC

Address: 105 Phyllis Drive, Croydon, PA 19021, United States
Email: don.edwards@kymerainternational.com
Website: www.telexmetals.com
Activity: Recycling

Thailand Smelting & Refining Co. Ltd

Address: 80 Moo 8, Sakdidej Road, Tambol Vichit, Amphur Muang, Phuket 83000, Thailand
Email: sales@thaisarco.com
Website: www.thaisarco.com
Activity: Tin Smelting, high purity refining, powders, granules, shapes and solder production

Traxys

Address: Route d'Arlon 19-21, 8009 Strassen, Luxembourg
Email: ioannis.Kallinikos@traxys.com
Website: www.traxys.com
Activity: Trading

Treibacher Industrie AG

Address: Division Hard Metals and Energy Storage, Auer von Welsbachstr. 1, 9330 Treibach-Althofen, Austria
Email: ulf.stromberger@treibacher.com
Website: www.treibacher.com
Activity: Hardmaterials like Carbides, Nitrides, Carbonitrides and Borides

Ulba Metallurgical Plant JSC

Address: 102 Abay Avenue, 070005 Ust-Kamenogorsk, Republic of Kazakhstan
Email: marketing_ta@ulba.kz
Website: www.ulba.kz/en
Activity: Processing

Vishay

Address: New Industrial Park, P.O. Box 87, Dimona 86100, Israel
Email: Efi.BenBaruch@vishay.com
Website: www.vishay.com
Activity: Capacitor Manufacture

Wood Mackenzie

Address: 54 Russell Road, London SW19 1QL, United Kingdom
Email: Teboho.Sebetela@woodmac.com
Website: www.woodmac.com
Activity: Research and Consultancy

Ximei Resources Holding Ltd

Address: Qiaotou Town, Yingde City, Guangdong Province, 513055, China
Email: market@ximeigroup.com
Website: hk.ximeigroup.com/
Activity: Processing

Yanling Jincheng Tantalum & Niobium Co., Ltd

Address: SME Pioneer Park, Yanling, Zhuzhou, Hunan 412500, China
Email: ireneguan@jinchengtn.com
Website: www.jinchengtn.com
Activity: Processing

Yano Metals Co. Ltd

Address: Tokyo office: 1-19-11, Dogenzaka, Shibuya-ku, Tokyo, 150-0043, Japan
Email: m_abe@yanokinzoku.co.jp
Website: www.yanokinzoku.co.jp/en/index.html
Activity: Recycling, Trading

Zhuzhou Cemented Carbide Works Imp. and Exp. Co.

Address: Diamond Road, Zhuzhou, Hunan 412000, China
Email: zccc@chinacarbide.com
Website: www.chinacarbide.com
Activity: Carbides

Antitrust Compliance Policy

This policy was adopted by the T.I.C. at the 57th General Assembly held on October 17th 2016.

Purpose, Scope, and Implementation: The T.I.C. is fully committed to ensuring that all its activities are carried out in full compliance with all applicable antitrust legislation. Failure to comply with this Policy may result in the association and/or its members violating antitrust legislation and being subject to the imposition of substantial fines or even criminal penalties for individuals.

All T.I.C. employees, consultants and their elected representatives are under an obligation to conduct all business dealings in accordance with any applicable antitrust legislation. The T.I.C. employees, consultants and elected representatives must sign a written undertaking to the effect that they have read and understood the Policy and that they agree to adhere to that Policy in the conduct of their business activities.

Members are to ensure that any of their employees involved in T.I.C. activities and all those carrying out activities within the association on behalf of members are fully informed about the T.I.C.'s Policy. Applicant members will be asked to sign a statement to the effect that they have read and understood the T.I.C.'s Policy and that they will adhere to that Policy if admitted.

T.I.C. activities. Information concerning the Policy is available on the T.I.C.'s web site. All meeting agendas will be sent in advance of the meeting, and they will contain a statement to the following effect: "This meeting will be conducted in full compliance with the T.I.C.'s Antitrust Compliance Policy". All chairpersons will be required to remind group members of the contents of the T.I.C.'s Policy on a regular basis. Minutes of the meetings will be distributed to the participants within a reasonable time after the meetings.

Escalation of concerns. All employees, consultants and members and their representatives are required to report any possible breaches of the Policy. Generally, all actual or potential breaches should immediately be reported to T.I.C.'s legal counsel.

The contact information is as follows:

Jones Day, Att. Luc Houben,
4 Rue de la Régence, 1000 Brussels, Belgium
lhouben@jonesday.com
phone: +32 2 645 14 11
<https://www.jonesday.com/brussels/>.

For further information regarding the basic concepts of antitrust law, including cartel agreements, and types of anti-competitive agreements such as price-fixing, market sharing, quantity-fixing and information exchange, please visit the T.I.C. website at <https://www.tanb.org/view/antitrust-compliance-policy>.

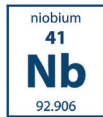


Tantalum and Niobium Suppliers for the Capacitor Electronics, Sputtering Target & Super Alloy Industries Worldwide



Tantalum Products Supplied:

- Tantalum Electron Beam Ingot, Tantalum Vacuum Arc Ingot
- Tantalum Electron Beam Chips, Tantalum Powder
- Tantalum Wire, Tantalum Furnace Parts, Tantalum Strip
- Tantalum Foil, Tantalum Plates – Blanks



Niobium products supplied:

- Niobium Electron Beam Ingot, Niobium Vacuum Arc Ingot
- Niobium Electron Beam Chips, Niobium Plate, Niobium Wire
- Niobium Oxide, Niobium Strip, Niobium Foil

Industries Served:

- Consumer Electronics
- Military Electronics
- Automotive Electronics
- Vacuum Melting
- Sputtering Target
- Deep Drawing
- Medical

A&R Merchants Inc. is a leader in the supply of conflict free Tantalum & Niobium products



A&R Merchants Inc.
Tantalum & Niobium

**Visit our website to view our ethics policy
armerchants.com • 800-805-9150**

Applying for T.I.C. membership

Who can apply?

Any organisation involved in the tantalum and/or niobium industries may apply for membership. The T.I.C. is composed of companies from the entire niobium and tantalum supply chains, from explorers to miners, traders and processors, through to end users and suppliers of goods and services to the industry.

How much are the annual membership fees?

Annual membership fees for the year 2023/24 are EUR 3000 for corporate members and EUR 500 for associate members, representing excellent value for money.

Corporate or associate membership?

Corporate members are commercially involved in the tantalum and/or niobium industries. They are voting members and make up the majority of the membership.

Associate membership is reserved for non-commercial organisations such as governments, civil society groups and academia. The Executive Committee has the final decision concerning which category is applicable to applicant organisations.

How to apply?

Applications for membership are considered at the annual general meeting held each September / October and should be submitted at least one month beforehand.

To apply, an organisation needs to:

- Complete the application form at <https://www.tanb.org/view/join-today> or from info@tanb.org.
- Provide a brief description of its activities in tantalum and/or niobium.
- Confirm that it has read and understood the T.I.C.'s current policies*.
- Corporate applicants need the support of two existing corporate members.
- The Executive Committee considers all applications and those that are accepted as valid are invoiced for three months' membership fee. Full payment is required at least one week before the General Assembly.
- All valid applications for membership are discussed and voted on by the existing members at the annual general meeting via an anonymous vote by ballot paper. Applicants may not be present at the meeting during membership discussions and voting.
- Successful applicants are considered to be a member of the T.I.C. for the year during which they were accepted. Regardless of the voting outcome, applicants are free to attend the technical conference that follows the members' general meeting.

If you are interested in joining the T.I.C. please contact heather.margerison@tanb.org

*In October 2022, these are the Artisanal and Small-scale Mining Code of Conduct, Transport Policy, Data Protection Policy and Antitrust Compliance Policy. All four are available at www.TaNb.org.



M A T E R I O N

Enabling High-Performance Tantalum and Niobium Solutions



Advanced specialty materials in a wide range of forms:

- Bar and rod
- Sheet
- Plate
- Powder
- Parts to customer specification

Contact us to learn more:
+1.216.225.1923
materion.com

Benefits of T.I.C. Membership

The T.I.C. undertakes a wide range of activities in support of its members' interests. The benefits of corporate membership include*:

Information services for members

- Monthly updates giving news and information about our industries.
- Quarterly niobium and tantalum statistics reports.
- The Bulletin, our printed newsletter packed with technical papers and news.
- Digital archives of tantalum and niobium technical papers, patents and statistical reports on the members' area of www.TaNb.org.

Technical services

- Priority advice and support from the T.I.C. Technical Officer.
- Guidance on pertinent subjects, such as artisanal and small-scale mining, additive manufacturing, antitrust and transport.
- Liaising with governments and other stakeholder organisations on subjects relevant to our industry including:
 - ◇ Supply chain due diligence and other mineral legislation.
 - ◇ Transport of naturally occurring radioactive materials (NORM).
 - ◇ Critical raw materials.

The General Assembly, our annual technical conference

- Priority booking and exclusive early-bird discounts to attend the world's leading tantalum and niobium conference.
- Exclusive networking opportunities at the annual members' meeting.

Benefit from T.I.C.'s promotion of niobium and tantalum

- Exhibiting and presenting at relevant conferences.
- Commissioning research and reports about critical aspects of the global tantalum and niobium industries.
- T.I.C. is home to the Anders Gustaf Ekeberg Tantalum Prize.

Members decide the T.I.C. policies and strategy

- All members can take part in the T.I.C.'s governance at the AGM.
- Corporate members can nominate representatives to stand for election to the Executive Committee and/or volunteer to serve on a subteam.
- Free listing in the Annual Report and on our comprehensive website.

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* For further information, including benefits of associate membership, please contact the T.I.C.
For details of how to apply for membership please see page 31.



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