

Exploring Hidden Treasures: The Critical Minerals Institute's Deep Dive into Rare Earths within Ionic Clays

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The world of rare earths is, for many, a topic reserved for experts and industry insiders. However, given the rising demand in sectors from technology to automotive, it's essential for us to grasp its implications. A recent discussion hosted by the Critical Minerals Institute (CMI) shed light on this last week, emphasizing the potential and challenges associated with ionic clay, a noteworthy source of these minerals.

Discover the Significance of Ionic Clays: The Critical Minerals Institute Hosts an Online Summit

written by Tracy Weslosky | September 10, 2023

The ionic clay buzz is all about sourcing the pivotal rare earth elements: neodymium, praseodymium, dysprosium and terbium. These elements are essential for creating permanent magnets used in automotive drive motors, as they maintain magnetism even under temperature extremes, ranging from 0°F to 400°F.

Ian Chalmers Joins The Critical Minerals Institute As New Co-Chair

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Toronto, February 28, 2023 – The [Critical Minerals Institute \(CMI\)](#), which was founded for education, collaboration, and to provide professional opportunities to meet the critical minerals supply chain challenges, is pleased to announce that it has appointed renowned rare earths executive Ian Chalmers as its Co-Chair, and industry expert Lara Smith as a new director.

Ian Chalmers is a geologist and graduate of the Western Australia Institute of Technology (Curtin University) and has a Master of Science degree from the University of Leicester in the United Kingdom. He has worked in the mining and exploration industry for over 50 years. Ian has a 35-year involvement with ASX listed company Alkane Resources Ltd. (ASX: ALK) as both Technical Director and Managing Director, and has steered Alkane through discovery, feasibility, construction and development of gold and gold-copper projects in New South Wales, Australia.

With a 30-year involvement in the rare metal and rare earth industry, Ian was involved with the discovery and evaluation of the Brockman rare metal and rare earth project in northern Western Australia, and has managed the geology, process development and global marketing effort for the Dubbo rare metal and rare earth project in New South Wales, advancing it to the threshold of development.

“I am delighted that Ian has joined the Critical Minerals Institute as a director and Co-Chair,” said CMI Founder Tracy Weslosky. “No one knows better how to actually develop a critical minerals resource or its importance to battery materials and electric vehicles, as well as future green technologies and energy production. We all look forward to working with Ian to make the Critical Minerals Institute the leading international organization for critical mineral companies and professionals designed to address relevant issues relating to the establishment of secure supply chains from mine to manufacturing.”

“I am also pleased to welcome Lara Smith as a new director of the Critical Minerals Institute,” Tracy continued. “Lara is COO and President of [Molten Metals Corp.](#) (CSE: MOLT) (formerly “Battery Elements”), and Founder and Managing Director of Core Consultants Pty (Guernsey) Ltd, an internationally recognized name in the natural resources industry.” Lara is a renowned industry writer and speaker in the field of business and economics, commodity analysis, and forecasting. “Lara has been a keynote speaker at international mining and business conferences in over 20 countries,” Tracy said, “and brings a wealth of practical rare earths experience to the CMI.”

The Critical Minerals Institute held its sold out inaugural summit in November, 2022 in Toronto, Canada, with over a hundred international experts, investors and critical minerals companies gathered to hear over 20 speakers and world-renown panelists. This year’s expanded summit, **“Driving To The Near Future – Critical Minerals For the EV Transformation”**, is scheduled for June 14-15, 2023, in Toronto. Keynote speakers such as Constantine Karayannopoulos from Neo Performance Materials Inc. (TSX: NEO) and Mark Chalmers of Energy Fuels Inc. (NYSE American: UUUU | TSX: EFR) have already confirmed and early registration is now open at

<https://criticalmineralsinstitute.com/the-critical-minerals-institute-summit/> .

The Critical Minerals Institute website at www.criticalmineralsinstitute.com was created to offer education, collaboration and an online resource to learn about critical mineral projects, emerging technologies, legislative initiatives, government funding, human capital needs, and capital market investment opportunities.

There is no charge or sign-up required for access to the Critical Minerals Institute website. A range of enhanced benefits are available to individual and corporate members of the CMI, including attendance at the CMI Summit, virtual events and additional resources. For details see: www.criticalmineralsinstitute.com/cmi-membership/.

For more information, please visit the Critical Minerals Institute website at www.criticalmineralsinstitute.com or to secure a CMI Corporate Membership, please contact CMI Director Tracy Weslosky at Tracy@criticalmineralsinstitute.com. For CMI inquiries, please contact Director, Membership Services Tom Park at +1 416 792 8228 or email tom@criticalmineralsinstitute.com.

About the Critical Minerals Institute: The [Critical Mineral Institute](#) (CMI) is an international organization for companies and professionals focused on battery materials, technology metals, defense metals, ESG technologies and practices, the general EV market, and the use of critical minerals for energy and alternative energy production. Offering an online site that features job opportunities that range from consulting roles to Advisory Board positions, the CMI offers a wide range of B2B service solutions. Also offering online and in-person events, the CMI is designed for education, collaboration, and to provide professional opportunities to meet the critical minerals supply

chain challenges.

Special Thanks to the Critical Minerals Institute Corporate Sponsors, which include the following companies: [ACME Lithium Inc.](#), [American Rare Earths Limited](#), [Appia Rare Earths & Uranium Corp.](#), [Auxico Resources Canada Inc.](#), [Avalon Advanced Materials Inc.](#), [Clean Air Metals Inc.](#), [Critical Metals PLC](#), [Critical Minerals Americas Inc.](#), [Defense Metals Corp.](#), [dynaCERT Inc.](#), [Elcora Advanced Materials Corp.](#), [Energy Fuels Inc.](#), [F3 Uranium Corp.](#), [Geophysx Jamaica Ltd.](#), [Grant Thornton LLP](#), [Imperial Mining Group Ltd.](#), [Kraken Energy Corp.](#), [Lithium Ionic Corp.](#), [Nano One Materials Corp.](#), [Neo Performance Materials Inc.](#), [Panther Metals PLC](#), [Power Nickel Inc.](#), [Save Canadian Mining](#), [Search Minerals Inc.](#), [Silver Bullet Mines Corp.](#), [Texas Mineral Resources Corp.](#), [Ucore Rare Metals Inc.](#), and [WCPD Inc.](#)

For more information, go to CriticalMineralsInstitute.com or email info@criticalmineralsinstitute.com for more information. You may also call +1 416 792 8228.

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Alkane's disruptive technology to reduce metallization costs by +50%

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[Note from the Publisher: This InvestorIntel interview is about the [Alkane Resources Limited: Investment in Clean Metal Processing Technology](#) news release put out on June 6, 2019 that

starts: “Alkane Resources Ltd (ASX: ALK) (Alkane) through its wholly owned subsidiary Australian Strategic Materials Limited (ASM) has executed a binding agreement with Zirconium Technology Corporation (a South Korean company) (Ziron Tech) to fund the final stage research and feasibility in relation to a clean metal process to convert metal oxide – including key Dubbo Project metals – to metals of high marketable purity (Technology).”

InvestorIntel did a follow-up column titled [Alkane deal with Ziron Tech to reduce metallization costs in excess of 50% for zirconium, hafnium, and titanium metals](#) on July 15, 2019 as we deem this news to be disruptive for the overall critical materials sector.]

“It is an electrolysis process. So it uses standard electrolysis but through a solid oxide membrane rather than a carbon electrode. That is a big step because it takes carbon out of the equation. The really exciting thing for us was, the solid oxide membrane that they use is a yttria stabilized zirconia. Here are two products that we will produce from Dubbo, we can actually produce yttria stabilized zirconia used in the process, so there was an added bonus for us. The beautiful thing about the process is that it generates only oxygen as waste material and produces high purity metals” States Ian Chalmers, Technical Director of [Alkane Resources Ltd.](#) (ASX: ALK | OTCQX: ANLKY), in an interview with InvestorIntel’s Tracy Weslosky.

Ian went on to say that the Ziron Tech Electrolysis Process is estimated to reduce metallisation costs by in excess of 50% and is applicable to the majority of Dubbo Project products, including zirconium, hafnium, titanium, neodymium and praseodymium. Ian also said that the process doesn’t add much to the capital and operating cost of the Dubbo Project and expects that by the end of 2020 this technology will be available to the

global critical material market.

To access the complete interview, [click here](#)

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Alkane's Chalmers on the supply shortage of rare earths

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“Surprisingly the rare earth market still has not shown the jumps that we believe it would have by now. The equity market is still very skeptical of us. I think that is a combination of things. Eventually the customers, the equity market are going to lock on or understand that if we are going down this path, which we all believe we are going, then the demand for rare earth magnets is just going to have to increase dramatically and there is not the supply around at this point in time.” States Ian Chalmers, Technical Director of [Alkane Resources Ltd.](#) (ASX: ALK | OTCQX: ANLKY), in an interview with InvestorIntel Corp. CEO Tracy Weslosky.

Tracy Weslosky: Ian, the headlines everywhere, we have got U.S.-China trade negotiations happening. We have China and Canada at each other. What is happening with the rare earth market?

Ian Chalmers: That is a good question actually. It is pretty hard to summarize in a short space of time. Surprisingly the rare earth market still has not shown the jumps that we believe it would have by now. The equity market is still very skeptical

of us. I think that is a combination of things. Eventually the customers, the equity market are going to lock on or understand that if we are going down this path, which we all believe we are going, then the demand for rare earth magnets is just going to have to increase dramatically and there is not the supply around at this point in time. At some point in the not too distant future the market is going to crack and we are going to see some really, really strong interest.

Tracy Weslosky: Ian I think we are both getting our updates on what is happening with Lynas for instance from just the general news media. What is your understanding of what is happening right now?

Ian Chalmers: My understanding, and again like you I am just getting it from the public domain, is that Lynas had been instructed that they have to come up with a solution to the radioactive waste. Now in the meantime they have stopped production. I understand it was only initially for a month while this review was completed, but they have to come up with an issue to deal with the radioactive waste that is already on site. It is a serious problem, but it is a problem I do not believe the Malaysian government cannot resolve because there is too much outside influence on the Malaysian government. There is a strong relationship between Japan and Malaysia and really a lot of Lynas' product goes to Japan. I think I would be very surprised if the Malaysian government shut down the operation.

Tracy Weslosky: I really appreciate the update with that. Speaking of updates, considering the size and the magnitude of your critical material resource, can you give us an update on what is happening with the Dubbo Project?

Ian Chalmers: Basically the Dubbo Project is ready to go. We are continuing to work on offtake agreements. We are continuing to

work on the finance. One of our major issues is our customers, particularly in the rare earth space keep wanting to see discounts. They want to see discounts to Chinese domestic price. In other words they are saying to us, yeah we will sign an off take contract, but you accept the 7%-8% vet as a discount and you put another small discount on top of that as the Chairman stated at the lead in to our annual general meeting back earlier in November...to access the complete interview, [click here](#)

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