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**COM0033: Nanocrystalline Ti 13Nb 13Zr Alloy for Dental Implant Applications**

*Lina Klinge, Carsten Siemers, Björn Sobotta, Hendrik Krempin, Lukas Kluy, and P. Groche, Technische Universität Darmstadt*

**COM0043: Review of Thermal and Wear Characteristics of Spark Plasma Sintered Titanium Alloy Reinforced with Mullite-rich Tailings for Production of Energy Efficient Vehicle Brake Rotors: South African Case Study**

*Daniel Okanigbe, Pretty Linda, Abimbola Popoola, and Olawale Popoola, Tshwane University of Technology*

**COM0072: Microstructure Formation in AA6XXX during Nano-second Pulsed Laser Processing**

*Daria Zhemchuzhnikova and Julien Zollinger, Institut Jean Lamour - Université de Lorraine*

**COM00124: Effect of Cu Content on Microstructure Evolution and Semisolid Behavior of AA6111 Alloy**

*Mohamed Qassem, University of Quebec at Chicoutimi; Daniel Larouche, Laval University; Mousa Javidani, University of Quebec at Chicoutimi; Josee Colbert, Arvida Research and Development Centre, Rio Tinto Aluminum; X. -Grant Chen, University of Quebec at Chicoutimi*

**COM00125: Effect of Two-Step Homogenization on the Evolution of Al<sub>3</sub>Zr Dispersoids in Al-0.3Mg-0.4Si-0.2Zr Alloy**

*Ali Elashery and Emad Elgallad, University of Quebec at Chicoutimi; Nick Parson, Arvida Research and Development Centre, Rio Tinto; X. -Grant Chen, University of Quebec at Chicoutimi*

## WALSIM IX: WATER, AIR, AND LAND SUSTAINABILITY ISSUES IN MINING AND METAL EXTRACTION

### **COM00110: Gas Handling Aspects of Radioactive Metal Melting for Nuclear Waste Management**

*Roki Fukuzawa, Tom Szwedowski, Brandon Yates, and S. Gagner, Hatch Ltd.*

### **COM00114: Improving the Performance of a Mineral Battery: Use of a $\text{CuFeS}_2$ /Activated Carbon Anode Material**

*Kashif Mairaj Deen and Edouard Asselin, The University of British Columbia*

### **COM00148: Potential of Ionic Liquids in Solvent Extraction for the Recovery of Cobalt and Nickel from Waste Matrices: A Review**

*Guillermo Alvial-Hein, Harshit Mahandra, and Ahmad Ghahreman, Queen's University*

### **COM00160: Behavior of Magnesia-, Silicon Carbide- or Alumina-based Refractories in Contact with Molten Copper Matte and Slag at Teniente Converter**

*Julio Ossandon, Camila Pizarro, and Leandro Voisin, University of Chile*

### **COM00187: Neutralization of Acid Mine Drainage Using Limestone and Waste Concrete Sludge**

*Yutaro Takaya, University of Tokyo; Shigeshi Fuchida and Chiharu Tokoro, Waseda University; Takaya Hamai, Yusei Masaki, and Kengo Horiuchi, Japan Oil, Gas and Metals National Corporation*

### **COM0026: Modelling the Solvent Extraction Separation of Neodymium from Praseodymium Using a First Principles Thermodynamic Model**

*Kevin Heppner, SysCAD*

**COM0045: Campaign Life Extension of Upgraded Horizontal Converters during the Process of Intensive Smelting and Converting with Oxygen-Enriched Blowing**

*Konstantin Bulatov, JSC Uralmexhanobr*

**COM0061: Assessment of the Net Emissions Reduction Potential of Iron Ore Beneficiation for Blast Furnace Ironmaking**

*Britt MacKinnon, Richard Elliott, Ian Cameron, and Manuel Huerta, Hatch*

**COM00106: Recycling Ferronickel Concentrates as an Iron Source to Extract Nickel from Nickel Sulphide Concentrates**

*Fanmao Wang, Sam Marcuson, and Mansoor Barati, University of Toronto; Leili Tafaghodi, McMaster University*

**COM00109: Leaching of Selenium, Tellurium and Silver from Copper Anode Slime by Sulfuric Acid in the Presence of Manganese (IV) Oxide and Graphite**

*Kurniawan Kurniawan, Korea University of Science and Technology; Jae-chun Lee, Korea Institute of Geoscience and Mineral Resources; Jonghyun Kim, Korea University of Science and Technology; Rina Kim and Sookyung Kim, Korea Institute of Geoscience and Mineral Resources*

**COM00111: Bioengineered Microorganisms for Nickel Removal**

*Patrick Diep, Heping Shen, Alexander Yakunin, Vladimiros Papangelakis, and Krishna Mahadevan, University of Toronto*

**COM00113: Green Engineering for Simultaneous Carbon Capture and Lithium Purification through Carbonation**

*Cris Arellano and J.Y. Lee, University of Science and Technology; Y.J. Song, Kangwon National University; B. Swain, Materials Science and Chemical Engineering Center, Institute for Advanced Engineering*

**COM00130: Effect of Calcium Ions on Oxidation and Surface Secondary Mineral Accumulation Formation on Pyrite in Alkaline Conditions**

*Jifeng Xue, Sana Ishida, Shigeshi Fuchida, and Chiharu Tokoro, Waseda University;  
Takuya Kaseyama, Yuji Aoki, and Yoshinobu Kishimoto, Sumitomo Metal Mining,  
Company Limited*

**COM00162: Separation of Lanthanum, Europium, and Ytterbium via Selective Adsorption onto Algal Biomass and Recovery via Desorption**

*Mitchell Zak, Nicolas Carunungan, Vladimiro Papangelakis, and D. Grant Allen,  
University of Toronto*