Structure of the Proceedings

- **Volume 1:**
  - Copper
  - Precious Metals
  - Waste Effluent Treatment/Biohydrometallurgical Applications
  - Process Metallurgy
  - Bridging Non-Ferrous and Ferrous Metallurgy

- **Volume 2:**
  - Lead and Zinc
  - Light Metals
  - Sustainable Technologies/Sustainability of Non-Ferrous Metals Production
  - Process Control/Process Modelling
  - Waste Heat Recovery by ORC Power Generation

- **Volume 3:**
  - General Hydrometallurgy
  - General Pyrometallurgy/Vessel Integrity/Process Gas Treatment
  - Recycling
  - Posters
  - Authors Index
  - Keywords Index
Table of Contents – Volume 1

Copper

Implementation of a Novel Technology for the Recovery of Cobalt from Copper Smelter Slags
Hira Singh, Bernd Friedrich

Synthesis of Copper Chromium Alloys by Aluminothermal Reduction
Dipl.-Ing. Siran Hassan Pour, Prof. Dr. Ing. Dr. h.c. Bernd Friedrich

Heat Transfer of Freeze-Linings Formed by a Molten Copper-Making Slag
Jani Jansson, Pekka Taskinen, Markku Kaskiala

HELM tracker™ Cathode Current Sensing Technology
Chris Boon, Rob Fraser, Tim Johnston, Sebastien Nolet, John Yesberg, Nigel Aslin

High Strength, High Conductivity and Microstructure of Nanostructured Cu-Ag Wires
Artur Kawecki, Tadeusz Knych, Eliza Sieja-Smaga, Andrzej Mamala, Paweł Kwaśniewski, Grzegorz Kiesiewicz, Beata Smyrak

Cuprous Sulfate Thermodynamics and Cuprous Perchlorate Oxidation Kinetics
Mohammad Mokmeli, Berend Wassink, David Dreisinger

Pilot Tests on Bismuth and Antimony Removal from Electrolyte at Atlantic Copper Refinery
Irene Ruiz, Guillermo Rios, Cristina Arbizu, Ian Burke, Uwe Hanschke

The Study on Fluid Mechanics for Oxygen Bottom Blowing Copper Smelting Process
Zhixiang Cui, Dianbang Shen, Xiaojie Wen, Zhi Wang, Ruimin Bian
Fundamental Studies on Arsenic Removal from Copper Concentrate by Heat Treatment
Shunta Shibuya, Chiharu Tokoro, Takahiko Okura

Fundamentals of a new Annealability Copper Wire Rod Test (AR)
B. Smyrak, T. Knych, A. Mamala, M. Walkowicz, A. Kawecki, P. Kwaśniewski, G. Kiesiewicz

Corrosion of Refractories by Copper Smelting Slags
Karel Tomášek, Pavol Vadász, Gabriel Sučik, Dávid Medveď

Oxygen-Free Copper Intended for Fire-Resistant Cables
PhD Monika Walkowicz, PhD Beata Smyrak, Prof. Tadeusz Knych

Towards a Methodology to Study the Interaction between Cu Droplets and Spinel Particles in Slags
M. Sc. Evelien De Wilde, Inge Bellemans, Prof. Dr. Ir. Kim Verbeken, Prof. Dr. Ir. Stephanie Vervynckt, Dr. Ir. Mieke Campforts, Dr. Ir. Kim Vanmeensel, Prof. Dr. Ir. Nele Moelans

Improvement on the Copper Matte Conveying System
Hongjun Wang, Dong Xu

The Role of Global Challenges for Sustainable Development in the Bor Basin Copper
Slavka Zeković, Miodrag Vujošević

A Crucible Setup for Investigations of the Copper Converting Stage in the Peirce-Smith Converter
Dipl.-Ing. Christoph Zschiesche, Dipl.-Ing. Jürgen Schmidl, Dr.-Ing. Gunter Morgenstern
Precious Metals

Scale Up of Ultrasonic Spray Pyrolysis – First Results for Synthesis of Nanosized Particles
J. Bogovic, S. Stopic, B. Friedrich, G. Matula, R. Rudolf

The Results of Using Mhd-Pump to Recover Platinum from Used Auto Catalytic Converters

Concentration of PGMs from Automobile Catalyst by Combining Surface Grinding and Quenching
Gangfeng Liu, Ayumu Tokumaru, Shuji Owada

Possibilities of Electrefining Processing of Cu-Pt Alloy Obtained from Used Auto Catalyst
Mariola Saternus, Agnieszka Fornalczyk, Kamil Staszewski

Distribution Ratios of Platinum Group Metals between the Al₂O₃-CaO-SiO₂ Slag and Molten Iron at 1873K
Professor Dr-Ing. Katsunori Yamaguchi, Hidehiro Sekimoto, Toshiko Kon, Akira Ishizaka, Toshiaki Yoshida, Takeaki Honda

Mechanism of Gold Nanoparticle Formation by Reduction from Aqueous Solutions
J. Zhao, S. Stopic, B. Friedrich, R. Rudolf
Waste Effluent Treatment/Biohydrometallurgical Applications

EAF Treatment for the Efficient and Complete Exploitation of the Bauxite Residue (Red Mud) Produced in the Bayer Process

Concept of EAF Dust Treatment Using Waste Plastics Containing Brominated Flame Retardants
Mariusz Grabda, Sylwia Oleszek-Kudlak, Etsuro Shibata, Takashi Nakamura

Synthesis and Characterization of Beudantite
Ing. Hernán Islas, Dr. Francisco Patiño, Ing. Mizraim U. Flores, Dr. Iván A. Reyes, M.C. Martín Reyes, Dr. Juan Hernández

High Temperature Recycling of Phosphorus from Sewage Sludge Ash
Ir. B. Soete, Dr. S. Arnout, Dr. E. Nagels

Investigation of Sorption Mechanism on Arsenic Co-Precipitation with Ferrihydrite for Quantitative Modelling of AMD Treatment
Chiharu Tokoro, Daisuke Haraguchi, Sayaka Izawa

Bioremediation of Copper Ions from Aqueous Solutions Using a Bacterial Strain
MSc. Diego Macedo Veneu, Dr. Gabriela Alejandra Huamán Pino, Dr. Mauricio Leonardo Torem

Removal of Cobalt and Manganese Ions from Aqueous Solutions by Gram Positive Strain
Amanda R. Pimentel, Gabriela H. Pino, Mauricio L. Torem, Leonardo M. Silva, Iranildes D. Santos
Effect of Bacterial Adaptation on Copper Bioleaching from Printed Circuit Boards
PhD Luciana Harue Yamane, PhD Jorge Alberto Soares Tenório, PhD Denise Crocce Romano Espinosa

Process Metallurgy

Characterization of Iron Silicate under Variation of Cooling Conditions and Chemical Composition
Dipl.-Ing. Eric Klaffenbach, Dipl.-Ing. Johannes Zervos, Dr.-Ing. Gunter Morgenstern

Bridging Non-Ferrous and Ferrous Metallurgy

Synthesis by Hydrogen Reduction and Characterization of Iron Nickel Alloys

Sustainable Carbonization of Iron Bath by Utilization of Renewable Bio-Char
Dipl.-Ing. Gernot Rösler, Priv.-Doz. Dipl.-Ing. Dr. Jürgen Antrekowitsch

Investigation of the Scale Formation of a Chromium and Molybdenum Containing Steel Alloy in an Oxipy®-Oxyfuel Combusted Reheat Furnace
Dipl.-Ing. Christina Sobotka, Univ.-Prof. Dipl.-Ing. Dr. Helmut Antrekowitsch, Dipl.-Ing. Michael Potesser

Assessment of the Addition in Hot Metal of Electric Arc Furnace Dust at a Temperature of 1500 °C
Vicente de Paulo Ferreira Marques Sobrinho, José Roberto de Oliveira, Estéfano Aparecido Vieira, Felipe Fardín Grillo, Victor Bridi Telles, Jorge Alberto Soares Tenório, Denise Crocce Romano Espinosa