

Selected Publications, Patents & Books

DR. MARIA KALASHNIKOVA, D.SC. — INDEPENDENT EXTRACTIVE METALLURGY CONSULTANCY

ORCID 0009-0007-0247-4073
Google Scholar aL4T18cAAAAJ
LinkedIn dr-maria-kalashnikova ·
mkalashnikova.com

BOOKS (3)

1. Naboychenko S.S., Shneerson Ya.M., Kalashnikova M.I., Chugaev L.V. *Pressure Hydrometallurgy of Non-Ferrous Metals, Vol. 1.* UGTU-UPI, Yekaterinburg, 2008 (376 pp.).
2. Naboychenko S.S., Shneerson Ya.M., Kalashnikova M.I., Chugaev L.V. *Pressure Hydrometallurgy of Non-Ferrous Metals, Vol. 2.* UGTU-UPI, Yekaterinburg, 2009 (612 pp.).
3. Kalashnikova M.I. *Scientific Basics of Modern Nickel and Copper Hydrometallurgy.* LAP LAMBERT Academic Publishing, 2011 (368 pp.).

INTERNATIONAL SYMPOSIUM & PEER-REVIEWED PAPERS (18)

1. Shneerson Ya.M., Ryabko A.G., Volkov L.V., Muravin K.A., Kalashnikova M.I. *Wasteless hydrometallurgical technology for matte treatment.* Clean Technology for the Mining Industry, University of Concepción, Chile, 1996, pp. 323–331.
2. Kalashnikova M.I., Shneerson Ya.M., Keskinova M.V., Chetvertakov V.V. *Non-Toxic Method of Nickel/Cobalt/Copper Sulfides Precipitation as Rich Concentrates from Diluted Sulfate Solutions.* Yazawa International Symposium, San Diego, USA, 2003.
3. Kalashnikova M.I., Shneerson Ya.M., Vigdorchik E.M., Zhmarin E.E., Keskinova M.V. *Optimisation of a roasting-leaching-electrowinning process to produce copper from copper concentrates using a mathematical model.* Copper 2003 / Cobre 2003, Santiago, Chile, Vol. VI — Hydrometallurgy of Copper (Book 1), 2003, pp. 469–481.
4. Kalashnikova M.I., Shneerson Ya.M., Vigdorchik E.M., Zhmarin E.E., Saltykov P.M., Saltykova E.G. *Kinetic studies and mathematical modeling of the sulfuric acid leaching of a copper-rich precipitate.* Copper 2003 / Cobre 2003, Santiago, Chile, Vol. VI — Hydrometallurgy of Copper (Book 2), 2003, pp. 581–593.
5. Kalashnikova M.I., Shneerson Ya.M., Keskinova M.V. *Interactions of ferriferous copper-nickel mattes with sulphuric acid: study of chemistry and kinetics.* Pressure Hydrometallurgy 2004, Alberta, Canada, 2004, pp. 887–898.
6. Kalashnikova M.I., Shneerson Ya.M., Keskinova M.V., Chetvertakov V.V. *Non-Traditional Methods of Heavy Metals Precipitation from Solution in the Form of Sulfide.* Sohn International Symposium, San Diego, USA, 2006, pp. 555–561.
7. Kalashnikova M.I., Shneerson Ya.M., Lapin A.Yu., Saltykov P.M., Keskinova M.V. *Hydrometallurgical Treatment of Substandard Pb–Zn Concentrates with Production of Zinc, Lead and Silver.* Sohn International Symposium, San Diego, USA, 2006, pp. 573–579.
8. Kalashnikova M.I., Volkov L.V., Shneerson Ya.M., Saltykova E.G. *Leaching of metal nickel in copper sulfate solutions in the presence of oxygen and chloride-ion.* Sohn International Symposium, San Diego, USA, 2006, pp. 377–385.
9. Volkov L.V., Kalashnikova M.I., Shneerson Ya.M. *The behaviour of copper during the dissolution of metallic nickel in CuSO₄ solutions.* Copper / Cobre 2007, John E. Dutrizac Symposium on Copper Hydrometallurgy, Toronto, Canada, 2007, pp. 333–343.
10. Volkov L.V., Kalashnikova M.I. *Mechanism of nickel oxides dissolving by sulphuric acid solutions in acid environment.* Non-Ferrous Metals, 2011, №2, pp. 68–71.
11. Kalashnikova M.I., Volkov L.V. *Chemistry of Nickel Protoxide and Acid Interaction.* Flogen SIPS / Sustainable Industrial Processing Summit, 2011, publ. 2012.
12. Sizyakov V.M., Dubovikov O.A., Nikolaeva N.V., Kalashnikova M.I. *The role of mineralized additives in the alumina phase transformation process.* Journal of Mining Institute, 2013, Vol. 202, pp. 48–55.
13. Saltykov P.M., Kalashnikova M.I., Saltykova E.G., Trubina O.A., Kotukhov S.B. *Hydrometallurgical processing of nickel sulphide concentrates from Australian deposits.* Tsvetnye Metally (Non-Ferrous Metals), 2014, №9, pp. 68–75.
14. Saltykov P.M., Kalashnikova M.I., Saltykova E.G. *Hydrometallurgical technology for pentlandite-pyrrhotite concentrates with high PGM recovery.* Tsvetnye Metally (Non-Ferrous Metals), 2014, №9, pp. 75–81.
15. Petrov G.V., Kalashnikova M.I., Fokina S.B. *Regularities of Selenium and Chromium Behavior in Redox Processes During Hydrometallurgical Treatment of Solid-Phase Products of Rhenium Extraction.* Notes of the Mining Institute (PMI), 2016, Vol. 220, pp. 601–606.
16. Kalashnikova M.I., Tsybulov L.B., Naboychenko S.S., Kolmachikhina O.B. *Promising Directions for the Processing of Oxidized Nickel Ores (Laterites) Applicable to Ural Deposits.* Tsvetnye Metally (Non-Ferrous Metals), 2019, №8, pp. 4–10.
17. Kalashnikova M.I., Saltykov P.M., Saltykova E.G. *Analyzing the applicability of hydrometallurgical techniques to the Voronezh region ores.* Tsvetnye Metally (Non-Ferrous Metals), 2020, №12, pp. 77–82.
18. Klimenko I.V., Greyver M.B., Kalashnikova M.I., Vostrikova N.M. *Influence of Various Factors on Iron Oxidation in Highly Concentrated Chloride Nickel Solutions.* Tsvetnye Metally (Non-Ferrous Metals), 2024, №10, pp. 47–54.

RUSSIAN FEDERATION PATENTS (11)

- 1. **RU 2114195** — Method of processing sulfide pyrrhotite-containing raw materials (1998)
- 2. **RU 2167101** — Method of producing thiosulphates (2001)
- 3. **RU 2182183** — Method of precipitating non-ferrous metals from solutions (2002)
- 4. **RU 2328537** — Method of selective precipitation of nickel, cobalt and copper from zinc in sulfate solutions in the form of sulfides (2008)
- 5. **RU 2319754** — Method of processing materials containing minerals in which nickel is in the oxide form (2008)
- 6. **RU 2444573** — Method for producing precious metals concentrate from sulfide copper-nickel raw materials (2012)
- 7. **RU 2573306** — Method of processing sulfide pyrrhotite-pentlandite concentrates containing precious metals (2016)
- 8. **RU 2601722** — Method of processing solutions containing non-ferrous metals (2016)
- 9. **RU 2626257** — Method of processing sulfide pyrrhotite-pentlandite concentrates containing precious metals (2017)
- 10. **RU 2712160** — Method of processing sulfide concentrate containing pyrrhotite, pyrite, chalcopyrite, pentlandite, and precious metals (2020)
- 11. **RU 2789528** — Method of processing precious-metals-bearing middlings from cathode nickel production (variants) (2023)

SOFTWARE & PROCESS-CONTROL IP

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Method of Calculating Control Actions for Purification of Nickel Solution from Iron — APC Algorithm

Klimenko I.V., Greyver M.B., Kalashnikova M.I., Abramova U.V.