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INTERNATIONAL SCIENTIFIC CONFERENCE
GREEN ECONOMY AND ADAPTATION
OF INDUSTRY TO CLIMATE CHANGES

COLLECTION OF ABSTRACTS

МЕЂУНАРОДНА НАУЧНА КОНФЕРЕНЦИЈА
ЗЕЛЕНА ЕКОНОМИЈА И АДАПТАЦИЈА
ПРИВРЕДЕ НА КЛИМАТСКЕ ПРОМЕНЕ

ЗБОРНИК АПСТРАКАТА

Belgrade / Beograd, 22-24 April 2024

ECOLOGICA

Izdavač:

Naučno-stručno društvo za zaštitu životne sredine Srbije ECOLOGICA
11000 BEOGRAD, Kneza Miloša 7a, Telefon/Fax: (011) 32 44 248
E-mail: ecologica.drustvo@gmail.com; www.ecologica.org.rs

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Pokrovitelj Konferencije:

Ministarstvo nauke, tehnološkog razvoja i inovacija Republike Srbije.

Štampa:

Akadska izdanja, Zemun
Godina izdavanja 2024
Tiraž 200

ISBN-978-86-89061-20-8

Posebnu zahvalnost Upravni odbor Naučno-stručnog društva za zaštitu životne sredine Srbije Ecologica izražava Savezu inženjera i tehničara Srbije, rukovodstvu i stručnoj službi za pomoć u pripremi i organizaciji Konferencije.

Scientific and Professional Society for Environmental Protection of Serbia;
Chamber of Engineers of Serbia; Union of Engineers and Technicians of
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Under the patronage of
Ministry of Science, Technological Development and Innovation
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11000 Beograd, Kneza Miloša 7a

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Štampa: Akademska izdanja, Zemun, 2024.

Tiraž: 200

CIP - Каталогизacija у публикацији

Народна библиотека Србије, Београд

338.1:502.131.1(048)

330.34:551.583(048)

504.7(048)

316.334.5(048)

502.174:502.521(048)

MEĐUNARODNA naučna konferencija Zelena ekonomija i adaptacija privrede na klimatske promene (2024 ; Beograd)

Book of Abstracts / International Scientific Conference Green economy and adaptation of industry to climate changes = Књига апстраката / Међународна научна конференција Зелена економија и адаптација привреде на климатске промене, Belgrade, 22-24 April 2024 ; [urednici Larisa Jovanović, Vadim Ermakov, Milan Brkljač]. - Beograd : Naučno-stručno društvo za zaštitu životne sredine Srbije Ecologica, 2024 (Zemun : Akademska izdanja). - 140 str. ; 25 cm

Uparedo tekst na engl i srp. ili engl. i rus. jeziku. - Na vrhu nasl str.: Scientific and Professional Society for Environmental Protection of Serbia – ECOLOGICA ... - "... konferencija planirana je u hibridnom (face to face i on-line) režimu uz korišćenje platforme Google meet." --> Predgovor. - Tiraž 200. - Str. 5-6: Foreword = Predgovor / Larisa Jovanović

ISBN 978-86-89061-20-8

а) Привредни развој -- Одрживи развој -- Апстракти б) Климатске промене -- Друштвено-економски аспект -- Апстракти в) Климатске промене -- Технолошки развој -- Апстракти г) Земљиште -- Ремедијација -- Апстракти

COBISS.SR-ID 146363401

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TREATMENT OF ACID MINE DRAINAGE (AMD) USING THE NEUTRALIZATION METHOD

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Abstract: Acid mine drainage (AMD) causes water systems pollution around the mine, and they require water treatment through active or passive treatment methods. Mine waters contain copper ions sometimes in a considerable concentration usually associated with an equivalent or even a two times higher concentration of Fe²⁺/Fe³⁺ ions. The presence of other heavy metal ions (Mn, Cd, Zn, Pb, Ni, etc.) in mine water depends on the mineralization of an ore body but their concentration is much lower than the concentration of copper or iron. Mine waters are, as a rule, acidic with pH value mostly between 2.5 and 4. Neutralization of selected AMD with Ca(OH)₂ was done in several stages up to different pH values depending on chemical characterization of neutralized water, and depending on the legislation for surface water. The neutralization procedure is applied by the members of the teams of the project RoRS 337, "ROmania Serbia NETwork for assessing and disseminating the impact of copper mining activities on water quality in the cross-border area" (RoS-NET2) and detail information concerning this procedure and field sampling details are available in the knowledge base that is built within the above project and at the url: <http://www.elearning-chemistry.ro/rosnet2/knowledge-base/>.

Keywords: acid mine drainage, neutralization, treatment, cross border area of Romania and Serbia.

Acknowledgments: We acknowledge the financial support of the Project RoRS 337-ROmania Serbia NETwork for assessing and disseminating the impact of copper mining activities on water quality in the cross-border area (RoS-NET2), implemented under the Interreg-IPA Cross-border Cooperation Romania-Serbia Programme that is financed by the European Union under the Instrument for Pre-accession Assistance (IPA II) and co-financed by the partner states in the Programme..

Keywords: EU, transport, emissions, decarbonisation, sustainable development