

Brief overview about Research and Reports on Metals

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Research and Reports on Metals is an Open Access, peer reviewed material science Journal dedicated to publish high quality articles covering wide range study areas of Metallurgy Research.

Research and Reports on Metals aims to provide the international platform for all the engineers, academicians and scientists to disseminate advancing knowledge on the start-of-art Metallurgical Engineering.

The Journal focuses on publishing latest research reports on the fundamentals and applied studies of all kinds of Metals and materials- their structure, properties, synthesis, processing, fabrication, design, performance and applications. Manuscripts elucidating science and technology innovations, industrial applications and sustainable practices are welcomed.

All the articles submitted to the Journal- Research and Reports on Metals will undergo double blind peer review process through the Editorial Manager System. The Editorial Manager System helps in maintaining the quality of the peer review process and provides easy access to the authors to track the status of the manuscript, including evaluation and publication in an automated way.

Materials science:

Materials science covers a part of engineering which involves discovering and designing new materials and analyzing their properties and structure. It includes the study of the characteristics and uses of different materials like metals, ceramics, and plastics that are employed in science and technology. Different materials have different strengths and weaknesses and are better for different purposes. Part of materials science involves classifying materials putting them into groups. Materials are generally split into four main groups like metals, polymers, ceramics, and composites.

Minerals & Ores:

Mineral is a manifestly happening chemical compound which is usually in crystalline and inorganic form. A mineral has one unique chemical composition but a rock can be a combination of different minerals. The study of minerals is referred as mineralogy.

An ore is a special type of rock that contains a large amount of a particular mineral (usually a metal) to make it economically practical to extract that mineral from the surrounding rock. Ores can be mined in a number of ways, including strip mining. Ores are classified based on how they form like magmatic or volcanic ores, Carbonate alkaline ores, metamorphic ores, Sedimentary ore.

Metals:

A substance with high electric conductivity, shiny surface, luster, and malleability, which comfortably loses electrons to form positive ions is known as metals. Metals are described according to their position on the Periodic table, together with groupings as alkali metals, alkaline earth metals, transition metals, and uncommon earth metals. Atoms of metals quite simply lose their outer shell electrons, resulting in a free flowing cloud of electrons inside their solid arrangement. This provides the potential of metal materials to easily transmit heat and electricity.

Metallurgy:

The science that offers with tactics utilized in extracting metals from their ores, purifying and alloying metals and growing useful objects from metals is called metallurgy. The basic metallurgical processes used for the extraction of metals from their ores are Grinding, Concentration, Flotation Tank, Rotation, Smelting and Refining. Metallurgy is subdivided by characteristics into ferrous metallurgy also known as black metallurgy and non-ferrous metallurgy also