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Discovering Groundbreaking Geopolymer-Based Materials with Versatile Designs, Ideal for the Construction and Infrastructure Industry

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Abstract : Geopolymer has gained significant prominence worldwide and is now widely regarded as a potential alternative to conventional Portland cement. Nevertheless, for it to be widely accepted and incorporated into national and international standards, it is crucial to establish precise definitions and dependable mix design methodologies for geopolymer materials. The lack of a common definition and methodology has led to inconsistencies and perplexity across various areas of research. Addressing this concern is imperative for several reasons. To overcome the existing inconsistencies and confusion, concerted efforts should be made to establish clear definitions and robust mix design methodologies for geopolymer materials. This can be achieved through collaborative research, knowledge sharing, and engagement with industry experts. By doing so, we can pave the way for the widespread acceptance and utilization of geopolymer materials, revolutionizing the construction and infrastructure industry in a sustainable and environmentally friendly manner. The primary goal of this article is to offer clear explanations regarding the different meanings of geopolymer and the various methodologies used in geopolymer processes. Its main aim is to improve comprehension of both unary and binary geopolymer systems. By thoroughly exploring existing research, this article strives to illuminate the diverse methods and techniques utilized in the exciting field of geopolymer science.

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