

June 3,2021

Press Release

JMI faculty member's invention 'environment friendly cement' gets Australian patent

An environment friendly cement invented by Dr. Ibadur Rahman, Assistant Professor, Department of Civil Engineering, Jamia Millia Islamia (JMI) along with other researchers from AMU has been granted a patent as an intellectual property by the Patent Office, Government of Australia.

The main objective of the invention titled '***A Method for Preparing Modified Cement and Evaluating Mechanical and Chemical Properties***' by Dr. Rahman and his co-inventors from AMU, Prof. Mohammad Arif, Prof. Abdul Baqi, Dr. M Shariq, Er. Mohammad Gamal Al-Hagri, Er. Amer Saleh Ali Hasan is to reduce carbon emissions.

Dr. Rahman said "There is a pressing need for the construction and other industries to go through green revolution-in other words, industries need to adopt and introduce environment-friendly materials."

"This invention focuses on the effect of cement replacement with micro-silica fume, nano-silica fume and fly ash in a combination of two additives on the mechanical properties of the concrete mixes. The combination of micro and nano-silica fumes improves the mechanical properties of concrete and eventually the microstructure and chemical analysis of the modified concrete show enhancement in the morphological properties of concrete owing to pore filling with dense and compact structure further" said the inventors.

Dr. Rahman has been working in the field of nano based modified cement and concrete composite for the last eight years during his PhD research. Dr. Rahman has now two patents to his credit. In September, 2020, Dr. Rahman was granted the patent titled "High Strength Cementitious Nanocomposite Compositions and the methods of making the same" by the intellectual property at the Patent Office, Government of India.

Public Relations Office
Jamia Millia Islamia



Dr. Ibadur Rahman



Australian Government
IP Australia

CERTIFICATE OF GRANT INNOVATION PATENT

Patent number: 2021101312

The Commissioner of Patents has granted the above patent on 5 May 2021, and certifies that the below particulars have been registered in the Register of Patents.

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Title of invention:

A METHOD FOR PREPARING MODIFIED CEMENT AND EVALUATING MECHANICAL AND CHEMICAL PROPERTIES

Name of inventor(s):

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Term of Patent:

Eight years from 13 March 2021

NOTE: This Innovation Patent cannot be enforced unless and until it has been examined by the Commissioner of Patents and a Certificate of Examination has been issued. See sections 120(1A) and 129A of the Patents Act 1990, set out on the reverse of this document.



Dated this 5th day of May 2021

Commissioner of Patents

PATENTS ACT 1990

The Australian Patents Register is the official record and should be referred to for the full details pertaining to this IP Right.

