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Ir. Rahmi Karolina, S.T, M.T, IPM, born in Medan on March 18, 1982, currently serves as Head of the Technical Implementation Unit of the USU Integrated Research Laboratory and one of the lecturers at the Department of Civil Engineering, Faculty of Engineering, USU and also works as an Associate Engineer. She obtained her Bachelor of Civil Engineering in 2005 and Master of Civil Engineering in 2008 and is currently continuing her doctoral education at Universitas Sumatera Utara.

Publications

2025
Jurnal internasional bereputasi

pH responsive natural-based hydrogel: Application in bacteria-based self-healing mortar

AGUSTINA ARI MURTI BUDI HASTUTI , PUPUT RISDANARENI , KHADIJAH , RAHMI KAROLINA , IRFAN MUSTAFA , STEFANUS ADI KRISTIAWAN , MUHAMMAD FATKURROHMAN TONTOWI , Andri Kusbiantoro

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Jurnal internasional bereputasi

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Buku referensi

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The Use of Volcanic Ash of Mount Sinabung Eruption as the Substitution of Fine Aggregate in Makin Batako (Mass-Produced Brick)

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