CENTRE FOR RURAL DEVELOPMENT AND TECHNOLOGY

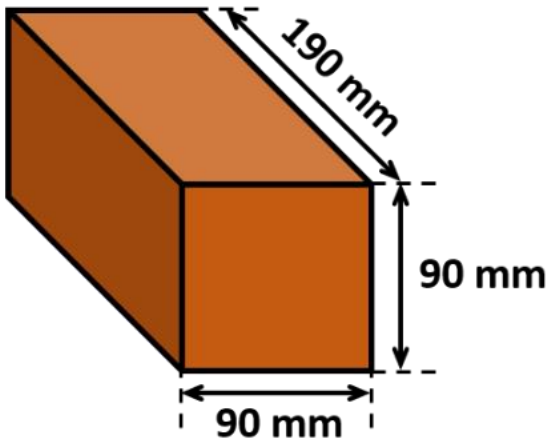
RESEARCH

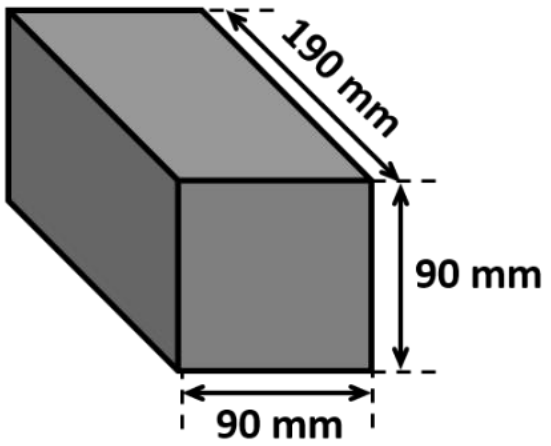
Conceptualization of colored bi-layered bricks

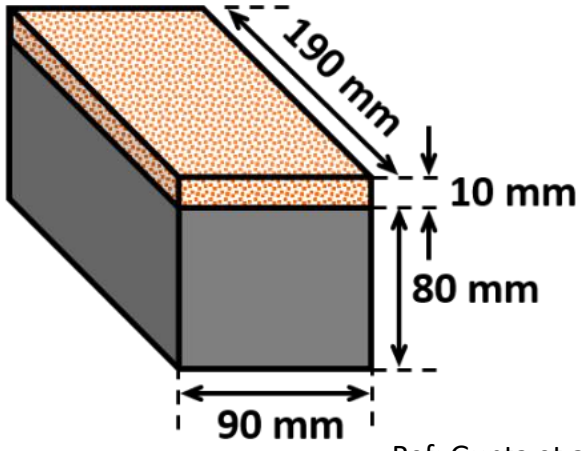
Fired clay bricks

Unfired fly ash bricks

Colored bi-layered bricks







Ref: Gupta et al. (2021)

Actual bi-layered bricks produced at laboratory scale

Publications

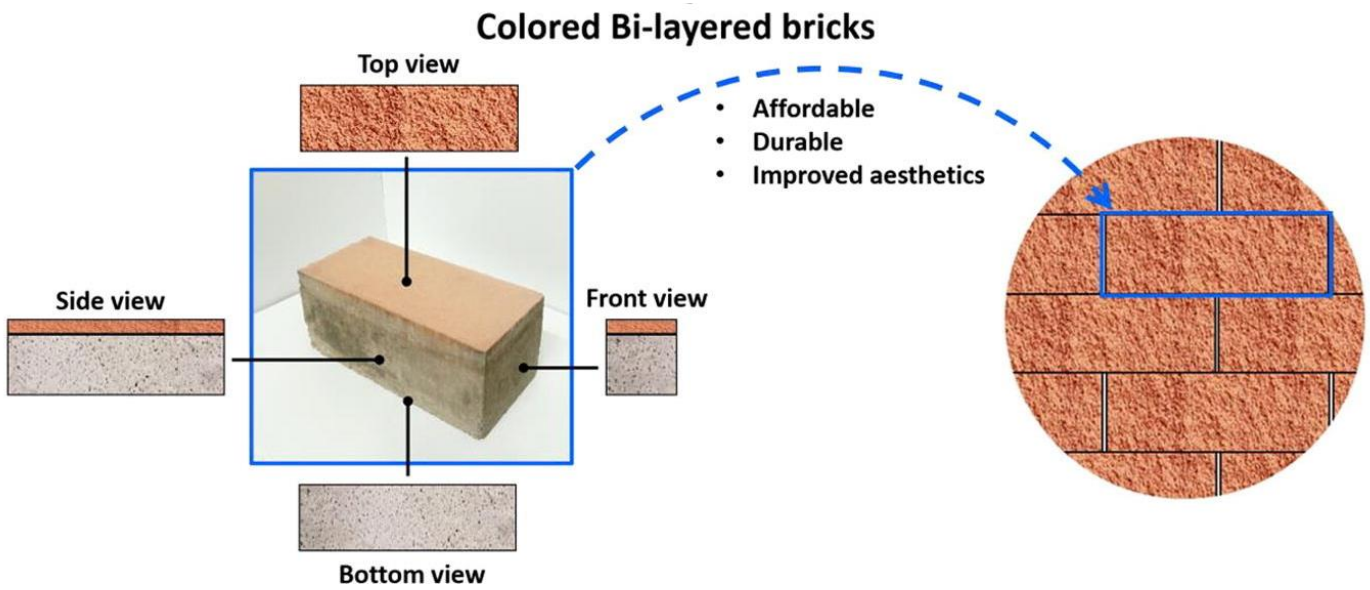
ELSEVIER

Construction and Building Materials

Volume 278, 5 April 2021, 122339

Production of colored bi-layered bricks from stone processing wastes: Structural and spectroscopic characterization

Vivek Gupta [a], Devesh Kumar Pathak [b], Rajesh Kumar [b, c], Ankur Miglani [d], Salman Siddique [e], Sandeep Chaudhary [a, c]



Novel colored bi-layered bricks for low cost rural housing

Publications (contd.)

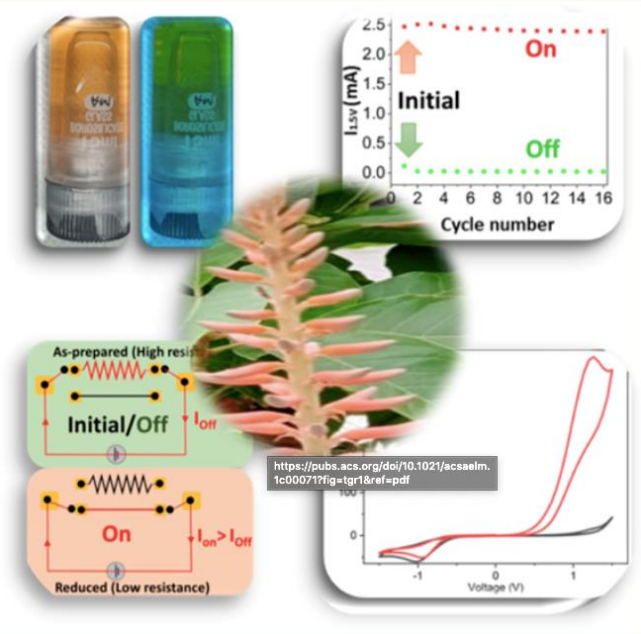
ACS APPLIED ELECTRONIC MATERIALS

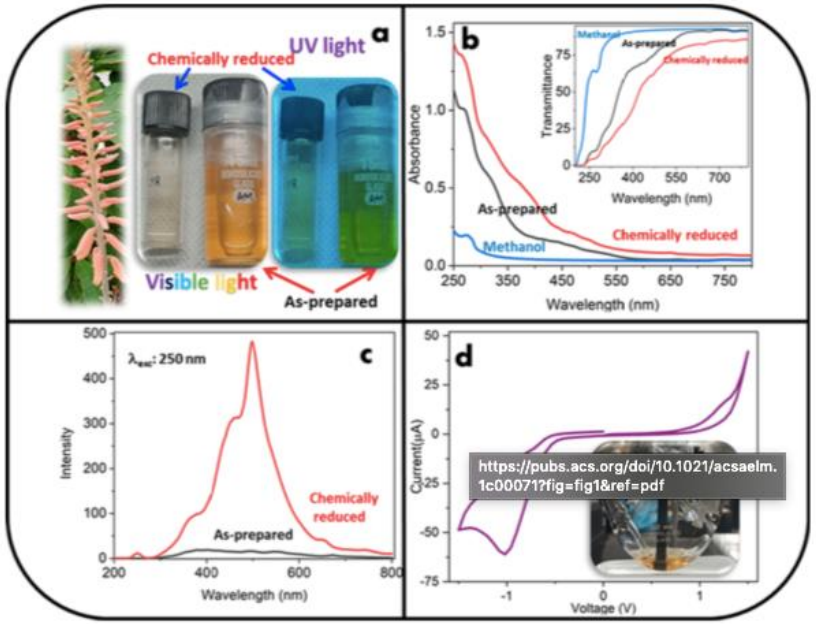
Herbal Electronics: Memory Device

pubs.acs.org/acsaelm Letter

Aloe Vera Flower Extract as a Botanical Resistive Memory Element: A Natural Memristor!

Tanushree Ghosh, Suchita Kandpal, Devesh K. Pathak, Manushree Tanwar, Chanchal Rani, Anjali Chaudhary,* and Rajesh Kumar*





Publications (contd.)

Sustainable local product development through computation

An Artificial Neural Network-based Prediction Model for Utilization of Coal Ash in Production of Fired Clay Bricks: A review

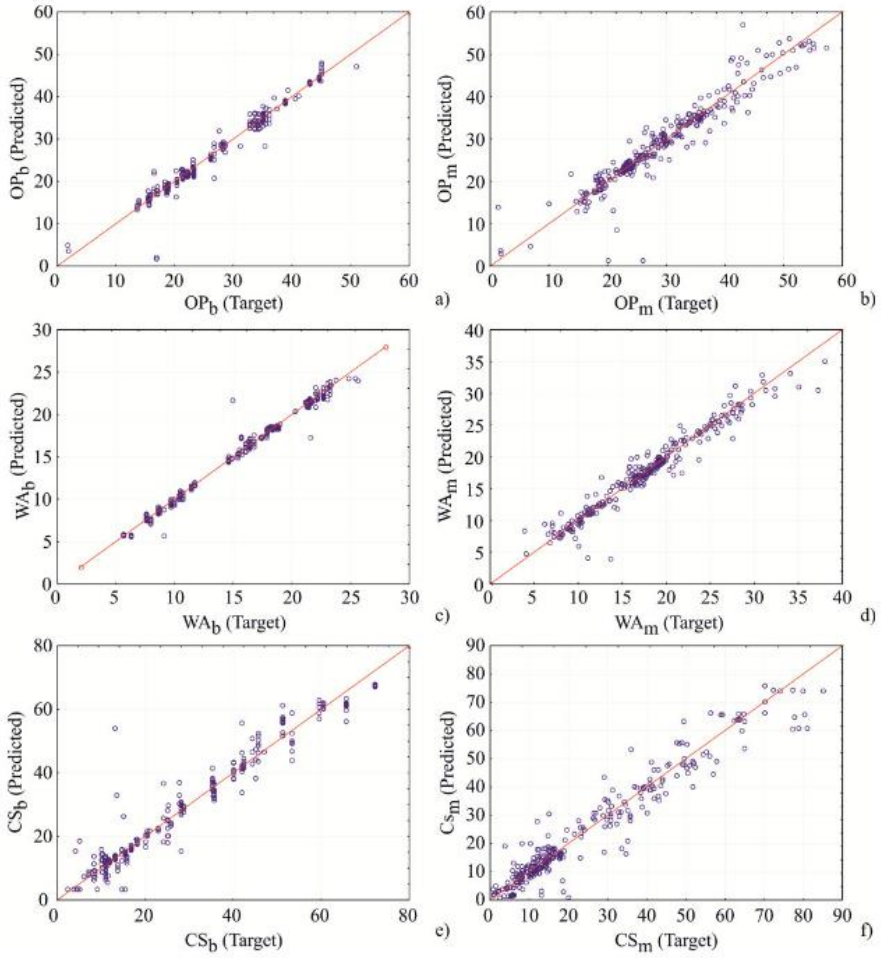
Milica Vidak Vasić[1*], Lato Pezo[2], Vivek Gupta[3], Sandeep Chaudhary[3,4], Zagorka Radojević[1]

[1]Institute for Testing of Materials IMS, Bulevar vojvode Mišića 43, 11000 Belgrade, Serbia

[2]University of Belgrade, Institute of General and Physical Chemistry, Studentski trg 12, 11000 Belgrade, Serbia

[3]Discipline of Civil Engineering, Indian Institute of Technology Indore, Simrol, Indore 453552, India

[4]Center for Rural Development and Technology, Indian Institute of Technology Indore, Simrol, Indore 453552, India



Publications (contd.)

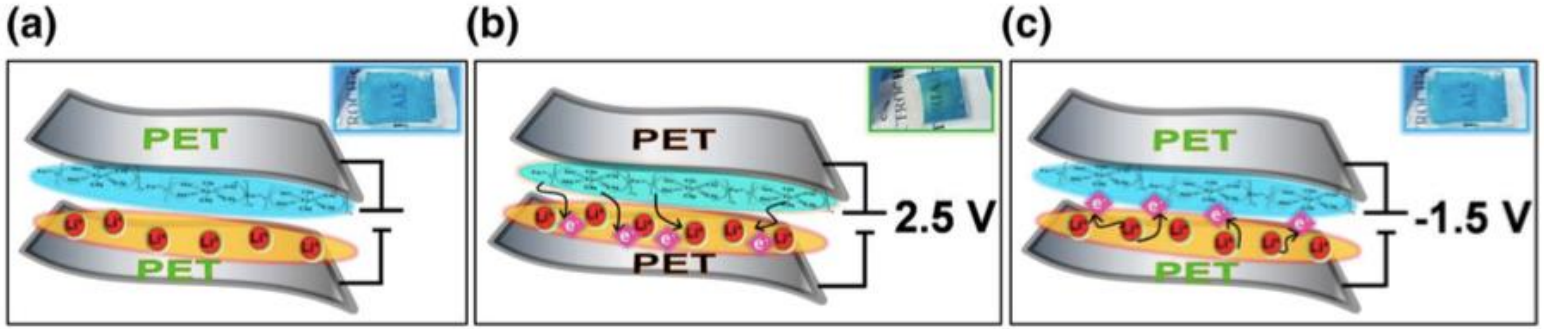
Received: 14 December 2020 | Revised: 18 January 2021 | Accepted: 26 January 2021 | IET Nanodielectrics

DOI: 10.1049/nde2.12011

ORIGINAL RESEARCH PAPER

Prussian blue-based inorganic flexible electrochromism glucose sensor

Economic Glucose sensing Devices



Received: 20 August 2020 | Revised: 18 December 2020 | Accepted: 21 January 2021 | IET Nanodielectrics

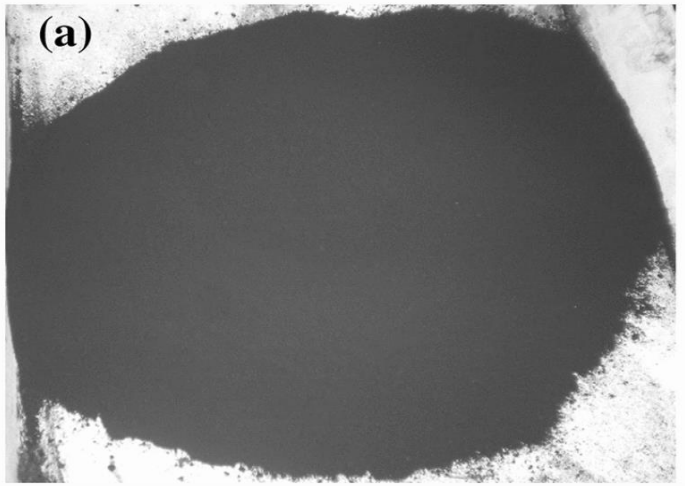
DOI: 10.1049/nde2.12012

ORIGINAL RESEARCH PAPER

Low voltage colour modulation in hydrothermally grown Ni-Co nanoneedles for electrochromic application

Publications (contd.)

Sustainable construction through waste utilization



Springer Link

ORIGINAL ARTICLE | Published: 21 February 2021

Investigating mechanical properties and durability of concrete containing recycled rubber ash and fibers

Trilok Gupta, Salman Siddique, Ravi K. Sharma & Sandeep Chaudhary

Journal of Material Cycles and Waste Management **23**, 1048–1057 (2021) | Cite this article

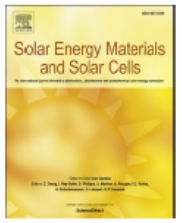
Publications (contd.)

Herbal Electronics: Electrochromic Device

Contents lists available at ScienceDirect

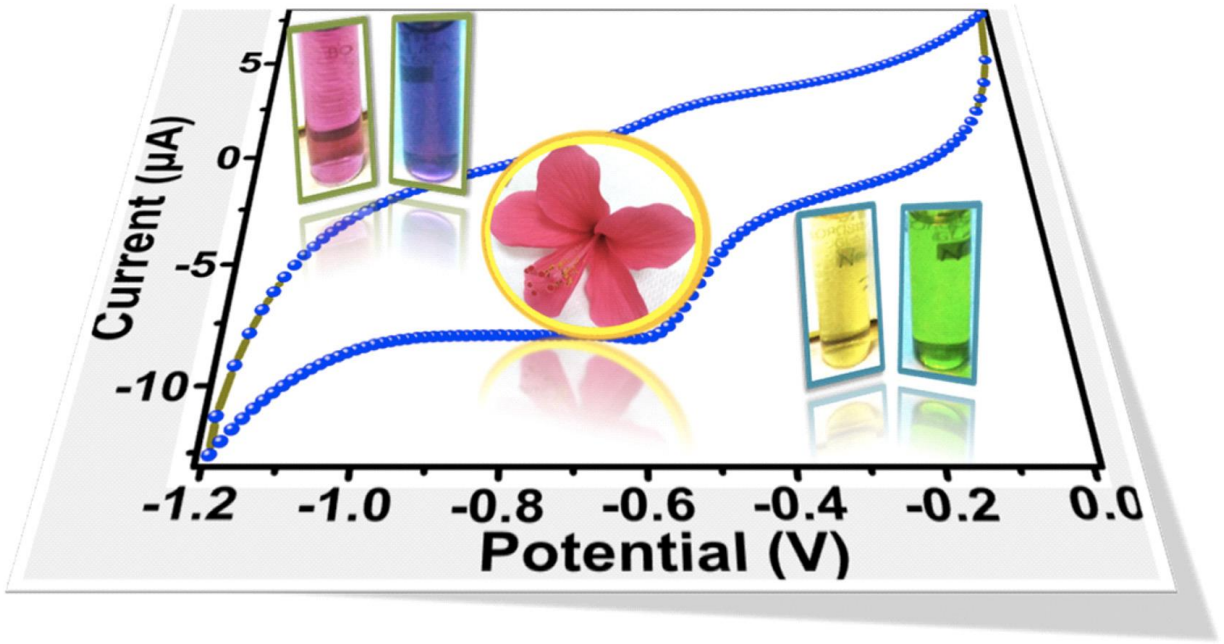
Solar Energy Materials and Solar Cells

journal homepage: http://www.elsevier.com/locate/solmat



Raw hibiscus extract as redox active biomaterial for novel herbal electrochromic device

Anjali Chaudhary [a], Devesh K. Pathak [a], Suchita Kandpal [a], Tanushree Ghosh [a], Manushree Tanwar [a], Rajesh Kumar [a,b,c,*]



Publications (contd.)

ELSEVIER

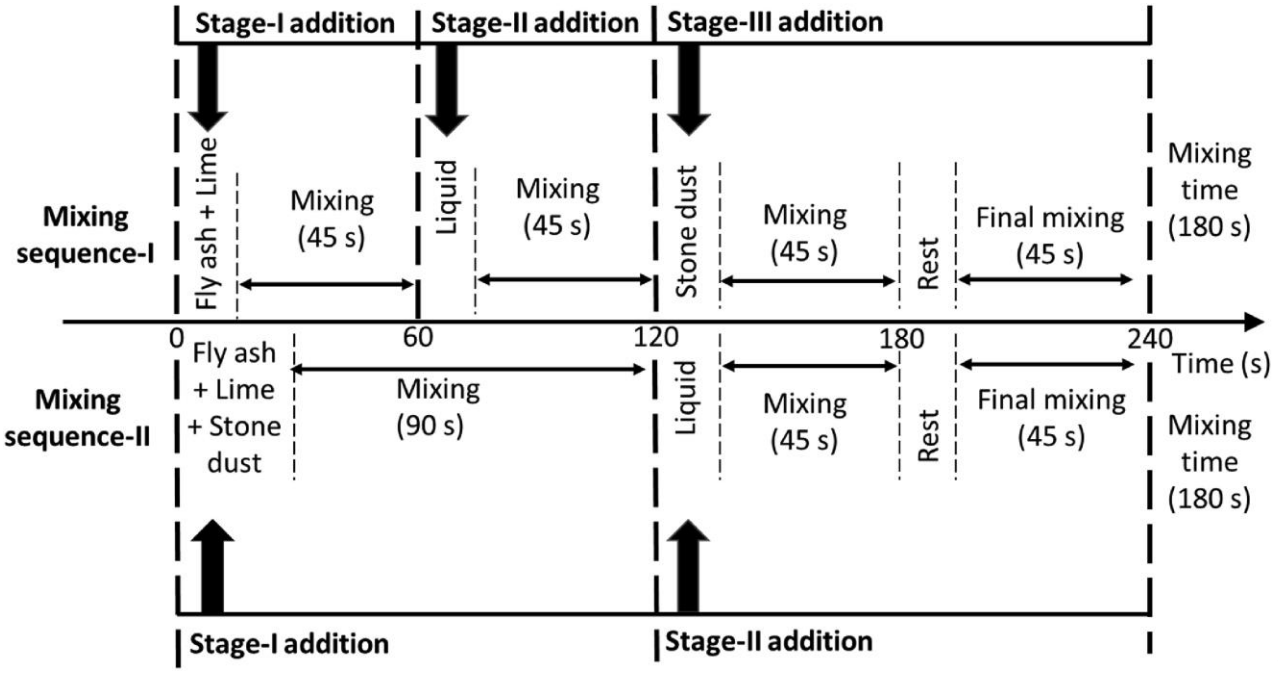
Journal of Cleaner Production

Volume 285, 20 February 2021, 124859

Optimum mixing sequence and moisture content for hydrated lime fly ash bricks

Vivek Gupta [a], Salman Siddique [b], Sandeep Chaudhary [a, c]

Product improvement through process optimization



Publications (contd.)

ELSEVIER

Resources, Conservation and Recycling

Volume 168, May 2021, 105250

Review

Sustainable development of self-compacting cementitious mixes using waste originated fibers: A review

Akshay Anil Thakare [a], Amardeep Singh [b], Vivek Gupta [a], Salman Siddique [c], Sandeep Chaudhary [a, d]

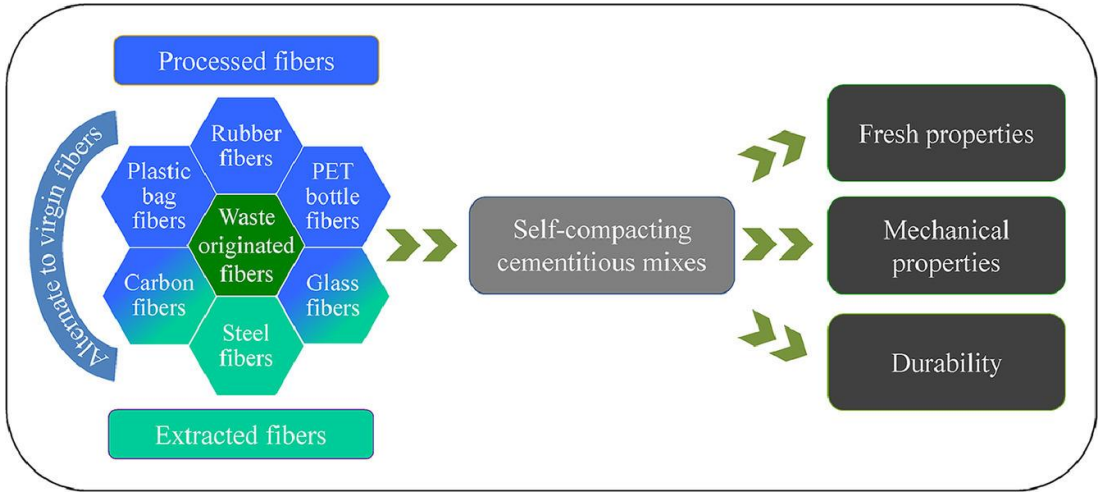
[a] Department of Civil Engineering, Indian Institute of Technology Indore, Simrol, Indore 453552, India

[b] Department of Structural Engineering, Tongji University, Shanghai, 200092, P.R. China

[c] Division of Architecture and Urban Design, Institute of Urban Science, Incheon National University, 119 Academy-ro, Yeonsu-gu, Incheon 22012, Republic of Korea

[d] Center for Rural Development and Technology, Indian Institute of Technology Indore, Simrol, Indore 453552, India

Identifying local wastes for developing construction materials

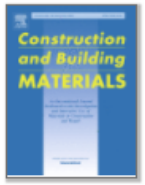


Publications (contd.)

ELSEVIER

Construction and Building Materials

Volume 262, 30 November 2020, 120745



A study on rheological properties of rubber fiber dosed self-compacting mortar

Akshay Anil Thakare [a], Salman Siddique [b], Shrikant N. Sarode [a], Roshni Deewan [a], Vivek Gupta [a], Sanchit Gupta [a], Sandeep Chaudhary [a, c]

Analytical Science Advances

Chemistry Europe
European Chemical Societies Publishing

FULL ARTICLE | Open Access

Raman imaging for measuring homogeneity of dry binary blend: Combining microscopy with spectroscopy for technologists

Vivek Gupta, Devesh K. Pathak, Sandeep Chaudhary, Rajesh Kumar

First published: 11 July 2020 | https://doi.org/10.1002/ansa.202000029 | Citations: 5

Vivek Gupta and Devesh K. Pathak contributed equally to this study.

Application of modern characterization techniques for assessing the effect of waste utilization for developing sustainable products

Publications (contd.)

Smart Windows: Energy Saving for rural areas

Received: 22 September 2020 | Revised: 6 January 2021 | Accepted: 18 February 2021

IET Nanodielectrics

DOI: 10.1049/nde2.12015

The Institution of Engineering and Technology WILEY

ORIGINAL RESEARCH PAPER

Improved ionic solid/viologen hybrid electrochromic device using pre-bleached Prussian-blue electrode