

Poster Presentation

ICTA2025

The 5th International Conference on Traditional and Advanced Ceramics:
ICTA2025 in conjunction with ASEAN Ceramics & Stone 2025

15–17 October 2025

Hall 5, Impact Exhibition & Convention Center, Bangkok, THAILAND



Session A: Advanced Ceramics

A-P-20: Wear Resistance of High Density Si₃N₄ – ZrO₂ Ceramic Composites

Kamol Traipanya,

Department of Materials Science, Faculty of Science, Chulalongkorn University, Thailand

A-P-24: Effect of Anodization Voltage and Heat Treatment on the Surface Crystallinity and Hydrophilicity of the Ti-6Al-4V

Phanawan Whangdee,

Department of Applied Physics, Faculty of Sciences and Liberal Arts, Rajamangala University of Technology Isan, Thailand

A-P-28: Structural and Functional Enhancement of PVA/Chitosan Hydrogels via Cu-Doped TiO₂ Nanoparticles for Potential Wound Dressing Applications

Kyi Pyar Min Lwin,

Department of Materials Engineering, Faculty of Engineering, Kasetsart University, Thailand

A-P-43: Influence of Diluent on Rheology, Polymerization, Debinding and Sintering of Alumina Ceramic via Resin Suspensions and LCD 3D Printing

Worachet Supasorn,

Department of Materials Science, Faculty of Science, Chulalongkorn University, Thailand



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Session B: Building and Construction Materials

B-P-08: Development of Permeable Ceramic Brick from Waste Porcelain Insulator and Fly Ash through Anorthite Phase Formation

Apirat Theerapapvisetpong,

Upcycled Materials from Industrial and Agricultural Wastes Research Unit, Department of Materials Science, Faculty of Science, Chulalongkorn University, Thailand

B-P-21: Fabrication of concrete roof tiles using mussel shell waste as coarse aggregate by casting technique

Pranee Junlar,

Department of science service, Thailand

B-P-22: Reducing Water Absorption of Cement Mortar by Using Modified Clay Brick Waste

Nuntaporn Kongkajun,

Department of Materials and Textile Technology, Faculty of Science and Technology and Thammasat University Research Unit in Sustainable Materials and Circular Economy, Thammasat University, Thailand

B-P-30: Use of Recovered Carbon Black from Spent Tires to Enhance Electrical Properties of Cement Composites

Parinya Chakartnarodom,

Department of Materials Engineering, Faculty of Engineering, Kasetsart University, Thailand

B-P-31: A Sustainable Construction Material: Geopolymer Composite from Fly Ash, Bagasse Ash, Sand and Asphalt Emulsion

Pakapond Chowandee,

Department of Materials and Textile Technology, Faculty of Science and Technology, Thammasat University, Thailand

B-P-32: Synthesis of Hydroxyapatite Powders by Chemical Precipitation with Transition Metal Ions Substitution for Solar Reflective Pigments

Thanakorn Wasanapiarnpong,

Center of Excellence on Petrochemical and Materials Technology, Upcycled Materials from Industrial and Agricultural Wastes Research Unit, Department of Materials Science, Faculty of Science, Chulalongkorn University, Thailand

B-P-39: Comparative Study On The Effects Of Alkali Activators And Alumina Additives On Properties Of Industrial Waste-Based Geopolymer Composites

Paing Set Soe,

Upcycled Materials from Industrial and Agricultural Wastes Research Unit, Department of Materials Science, Faculty of Science, Chulalongkorn University, Thailand

B-P-40: Utilization of solid waste from fluidized bed process for fabricating press-formed inorganic polymer-based brick

Nithiwach Nawaukkaratharnant,

Metallurgy and Materials Science Research Institute and Upcycled Materials from Industrial and Agricultural Wastes Research Unit, Department of Materials Science, Faculty of Science, Chulalongkorn University, Thailand

B-P-42: Fabrication of Porous Fly Ash/Bagasse Ash-based Geopolymer Insulation Brick

Chayanit Sripradit,

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Session D: Ceramic Industrial Technology

D-P-29: Effects of Mae-Than Ball clay, Lampang clay, Pottery Stone, and Quartz on Physical and Mechanical Properties for Porcelain Stoneware Products

Phiraya Pukpobsuk,
Department of Industrial Technology and Innovation Management, Faculty of Industrial Technology,
Lampang Rajabhat University, Thailand

D-P-56: The Effect of Fluxing Agents on The Synthesis of Malayaite Ceramics Colour Pigment

Lapasrada Paowan,
Department of Materials Science and Engineering and Industrial Technology, Silpakorn University, Thailand



Session E: Ceramics for Energy and Environmental Applications

E-P-18: Synthesis of Manganese Dioxide from Spent Zinc-Carbon Batteries with Hydrothermal Process for Application in Zinc-Ion Batteries

Apinya Suwaphapphattrarphon,
Department of Materials Science, Faculty of Science, Chulalongkorn University, Thailand

E-P-26: Efficient Direct Recycling of NMC111 Batteries Using LiI-LiOH Eutectic Salt

Parame Janson,
Department of Materials Science, Faculty of Science, Chulalongkorn University, Thailand

E-P-33: Influence of Synthesis Method on the Structural and Visible-Light Photocatalytic Activity of BiVO₄

Phakapol Lainok,
Department of Materials Science, Faculty of Science, Chulalongkorn University, Thailand

E-P-37: Fabrication and Performance Evaluation of Highly Porous Clay-Based Ceramics for the Removal of Methylene Blue Dye from Water

Montree Hankoy,
Department of Physics, School of Science and Devices and Systems for Energy and Environment Research Unit, School of Science, King Mongkut's Institute of Technology Ladkrabang, Thailand

E-P-55: Preparation of Zeolite 13X from Ceramic Wastes for Carbon Dioxide Capture

Kittiphum Wong,
Department of Materials Science, Faculty of Science, Chulalongkorn University, Thailand

E-P-59: Mineral Waste-Derived Zeolites as Low-Cost Adsorbents for CO₂ Capture

Panida Wimuktiwan,
National Metal and Materials Technology Center, Thailand

E-P-60: Investigation of Potential Interaction and Oxide Dispersion in Cesium Dihydrogen Phosphate -cTitanium Dioxide Composites Prepared via various Methods

Sunithi Ratana,
Department of Materials Science, Faculty of Science, Chulalongkorn University, Thailand

Session F: Glass and Coatings Technology

F-P-47: Reddish-orange luminescence of new Sm³⁺-doped borate glass for X-ray imaging

Nuanthip Wantana,
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Session G: Green Technology and Sustainable Materials

G-P-14: Effect of synthesis parameters of zeolite 13X from porcelain insulator waste by alkali fusion method on the carbon dioxide absorption properties

Kittipong Sinwanasarp,
Center of Excellence on Advanced Materials for Energy Storage and Upcycled Materials from Industrial and Agricultural Wastes Research Unit, Department of Materials Science, Faculty of Science, Chulalongkorn University, Thailand

G-P-19: Optimizing Ceramic Engobe Performance through Sustainable Material Integration: Effects on Physical and Mechanical Properties under Single-Firing

Nophawan Dechboon,
Faculty of Art and Architecture, Rajamangala University of Technology Lanna, Thailand

G-P-35: Microwave-Assisted Green Synthesis of TiO₂ Nanoparticles via *Mangifera indica* Extract

Sudarat Tanjumras,
Department of Physics, School of Science, King Mongkut's Institute of Technology Ladkrabang, Thailand

G-P-36: Facile Microwave-Assisted Green Synthesis of Zinc Oxide Nanoparticles using Garlic Peel Waste (*Allium sativum* L.) Extract

Chutipon Tongleak,
Department of Physics, School of Science, King Mongkut's Institute of Technology Ladkrabang, Thailand

G-P-41: Ecofriendly Synthesis and Characterization of Magnesium Oxide Nanoparticles Using Aloe vera Extract as a Reducing and Stabilizing Agent

Patharaporn Robroocharn,
Department of Physics, School of Science, King Mongkut's Institute of Technology Ladkrabang, Thailand

G-P-52: Green Synthesis and Optimized Annealing Temperature Effects on Zinc Oxide Nanoparticles Using Mango Peel Extract

Wantana Koetnuyom,
Lasers and Optics Research Center (LANDOS) and Faculty of Applied Science, King Mongkut's University of Technology North Bangkok, Thailand

G-P-54: Designing Geopolymer-Zeolite Hybrids: Structural Evolution and Phase Control in Alkali-Activated Metakaolin

Sujitra Onutai,
Key Laboratory of Advanced Materials of Tropical Island Resources of Ministry of Education, School of Materials Science and Engineering, Hainan University, PR China

G-P-57: The Synthesis of Malayaite-base pigment from wastes

Teerapong Manakit,
Department of Materials Science and Engineering and Industrial Technology, Silpakorn University, Thailand

G-P-58: Effects of Alpha-Gypsum Plaster Cement on Casting of Activated Charcoal Prepared from Vetiver Grass Leaves for Odor Absorption Applications

Uraiwan Leela-adisorn,
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