

Session Schedule

Session	Topic	Date
Session A1	Low Carbon Cements and Binders	14 Dec, A.M.
Session A2	Recycled Concrete Aggregates	14 Dec, A.M.
Session A3	CO ₂ Mineralization and Environmental Assessment	14 Dec, A.M.
Session A4	High Performance Concrete Incorporating Wastes	14 Dec, A.M.
Session B1	Waste to Geopolymer	14 Dec, P.M.
Session B2	Blended Cements and Hydration	14 Dec, P.M.
Session B3	Carbonatable Systems and Sustainability	14 Dec, P.M.
Session B4	Waste Treatment and Enhancement	14 Dec, P.M.
Session C1	Sustainable Concrete and Characterization	15 Dec, A.M.
Session C2	Recycling of Ashes	15 Dec, A.M.
Session C3	CO ₂ Sequestration and Sustainability	15 Dec, A.M.
Session C4	Waste Utilizing in Concrete	15 Dec, A.M.
Session D1	Fibre Reinforced Materials	15 Dec, P.M.
Session D2	Alkali Activation and Artificial Aggregates	15 Dec, P.M.
Session D3	Contaminant Leaching and Environmental Impact	15 Dec, P.M.
Session D4	Life Cycle Assessment and Others	15 Dec, P.M.

Day 1: 14 Dec 2023 (Thursday)					
Session A1		Low Carbon Cements and Binders			Room Z205
Chairmen		Jun Chang (Dalian University of Technology) Giulia Costa (University of Rome Tor Vergata)			10:45 – 12:30
Invited speech: Potential of using calcined clay as a supplementary cementitious material for the production of low-carbon cement Zengfeng Zhao (Tongji University)					10:45 – 11:00
1	Valorization of waste glass for low-carbon concrete production in Singapore	Zhiyu Luo	National University of Singapore	Oral	11:00 – 11:15
2	Performances improvements of supersulfated cement (SSC) by waste alkaline activators- red mud and carbide slag	Jixiang Wang	China University of Mining and Technology (Beijing)	Oral	11:15 – 11:30
3	Utilization of high titanium slag to improve the fire-resistive properties of low carbon cementitious composites	Xiaomeng Ma	Southeast University	Oral	11:30 – 11:45
4	Recycling co-combustion ash of sewage sludge and rice husk for low-carbon construction material production	Yan Xia	Zhejiang University	Oral	11:45 – 12:00
5	Effect of fly ash, silica fume and coarse gradation in optimizing the mechanical properties of high-performance concrete	Dustin Glenn Cuevas	Technological Institute of the Philippines - Manila	Oral	12:00 – 12:15
6	Investigation of mechanical properties and microstructural evolution of cementitious materials containing waste clay brick powder at low water-cement ratio	Shujun Li	Southeast University	Flash	12:15 – 12:20
7	Recycling of municipal solid wastes for the preparation, microstructural evolution and mechanical properties of belite-rich low-carbon eco-cements	Lu Zhu	The Hong Kong Polytechnic University	Flash	12:20 – 12:25
8	The influence of biochar on the immobilization of heavy metals in asphalt rubber	Fuliao Zou	The Hong Kong Polytechnic University	Flash	12:25 – 12:30

Day 1: 14 Dec 2023 (Thursday)					
Session A2	Recycled Concrete Aggregates				Room Z207
Chairmen	Jie Ji (Beijing University of Civil Engineering and Architecture) Minna Sarkkinen (Tapojärvi Oy)				10:45 – 12:30
Invited speech: Industrial production of water-washed recycled aggregates used for real-scale non-structural and structural concrete in Barcelona Miren Etxeberria (Universitat Politècnica de Catalunya.BarcelonaTECH)					10:45 – 11:00
Invited speech: The influence of cementitious material proportion on the sulfate resistance of recycled aggregate concrete Ting Du (Huazhong University of Science and Technology)					11:00 – 11:15
1	Concrete mix design using recycled aggregates: Umbrella review	Lapyote Prasittisopin	Chulalongkorn University	Oral	11:15 – 11:30
2	Utilizing tunnel boring machine waste as a sustainable alternative for natural aggregates in concrete	Chao Qun Lye	National University of Singapore	Oral	11:30 – 11:45
3	Use of recycled and siderurgic aggregates in the urban development of the Island of Zorrotzaurre (BILBAO)	José Manuel Baraibar	Viuda de Sainz	Oral	11:45 – 12:00
4	Evolution law of service performance of ferrochrome slag aggregate concrete in deep-underground environment	Maopeng Jiao	Southeast university	Oral	12:00 – 12:15
5	Compressive behavior and water permeability of recycled lump-aggregate concrete with recycled sand from WRSG	Tao Zhang	South China University of Technology	Oral	12:15 – 12:30

Day 1: 14 Dec 2023 (Thursday)					
Session A3	CO ₂ Mineralization and Environmental Assessment				Room Z209
Chairmen	Priyadharshini Perumal (University of Oulu) Xiaoshuang Shi (Sichuan University)				10:45 – 12:30
Invited speech: Assessment of carbonated ferronickel slag as supplementary cementing materials with improved carbon impact and reactivity Martin Cyr (Université de Toulouse)					10:45 – 11:00
1	Validation of a BIM tool for the quantification of waste and impacts of demolition projects	David Garcia Estevez	TECNALIA	Oral	11:00 – 11:15
2	Utilization of demolished concrete wastes for CO ₂ capture and mineralization in the cement and lime industry	Liang Li	CSIRO	Oral	11:15 – 11:30
3	CO ₂ mineralization and in-situ storage of industrial solid waste drive a substantial decarbonization potential: Roles of unfavorable impurities	Yikai Liu	University of Padua	Oral	11:30 – 11:45
4	Preparation of high-performance of CO ₂ -cured concrete using hydrated magnesia carbonates	Shaoqin Ruan	Zhejiang University	Oral	11:45 – 12:00
5	CO ₂ sequestration and upcycling of carbonated γ -C ₂ S binders via thermal activation	Zhe Yu	Hunan University	Flash	12:00 – 12:05
6	Enhancing the treatment efficiency of recycled concrete fines with aqueous carbonation	Yi Jiang	The Hong Kong Polytechnic University	Flash	12:05 – 12:10
7	Assessing the rheology and buildability of 3D printed mortar with CO ₂ modification	Kaiyin Zhao	The Hong Kong Polytechnic University	Flash	12:10 – 12:15
8	Bonding properties between 3D printed recycled coarse aggregate concrete and rebar	Huawei Liu	The Hong Kong Polytechnic University	Flash	12:15 – 12:20
9	Preparing carbon-negative vaterite cement from recycled concrete fines: A promising approach	Jiankai Xie	The Hong Kong Polytechnic University	Flash	12:20 – 12:25
10	Carbonized recycled coarse and fine aggregate preparation for concrete blocks to achieve ultra-low or negative carbon	Qinglong Qin	The Hong Kong Polytechnic University	Flash	12:25 – 12:30

Day 1: 14 Dec 2023 (Thursday)					
Session A4	High Performance Concrete Incorporating Wastes				Room Z211
Chairmen	Sukhoon Pyo (Ulsan National Institute of Science and Technology) Qiang Wang (Tsinghua University)				10:45 – 12:30
Invited speech: Sustainable dredging and sediment re-use at the port of Kokkola, Finland Michael Mengelt (Ramboll Finland Oy)					10:45 – 11:00
Invited speech: Reuse and recycling in construction using clay as building material Ute Kalbe (Federal Institute for Materials Research and Testing)					11:00 – 11:15
1	Recovery of locally dredged sands in concrete: New tidal dock case-study, Port of Antwerp (Belgium)	Niels Hulsbosch	Buildwise	Oral	11:15 – 11:30
2	Evaluation of graphene oxide on microstructure and micromechanical properties of ultra-high performance concrete with recycled fine aggregate	Kang Chen	Wuhan Institute of Technology	Oral	11:30 – 11:45
3	High ductility cementitious composites incorporating seawater coral sand (SCS-HDCC) for offshore engineering	Xiangpeng Fei	Southeast University	Oral	11:45 – 12:00
4	Applicability of cement paste mixed with waste ginger as PC grout	Maho Sato	Kochi College	Oral	12:00 – 12:15
5	Valorization and enhancement mechanism of ferrochrome slag as aggregate for manufacturing ultra-high performance concrete (UHPC)	Yuanyuan Zhu	Southeast University	Flash	12:15 – 12:20
6	Development and characteristics of carbonation-enhanced high-strength foam concrete (HSFC): Towards high structural efficiency and carbon sequestration	Dingqiang Fan	The Hong Kong Polytechnic University	Flash	12:20 – 12:25
7	Graphite modified recycled aggregates towards a highly heat-conductive concrete	Chen Chen	Southeast University	Flash	12:25 – 12:30

Day 1: 14 Dec 2023 (Thursday)					
Session B1		Waste to Geopolymer			Room Z205
Chairmen		Martin Cyr (Université de Toulouse) Xiaoyu Shang (Northeast Electric Power University)			14:00 – 16:05
Invited speech: Mechanical properties and environmental impact assessment of geopolymer materials based on multi-source solid wastes Xiaoshuang Shi (Sichuan University)					14:00 – 14:15
Invited speech: Alkali activation of waste concrete powder for the development of eco-friendly cementless binder Sukhoon Pyo (Ulsan National Institute of Science and Technology)					14:15 – 14:30
1	Potential possibility of dredged sediment as aluminosilicate precursor in alkali-activated system	Zhenzhong Chen	Southeast University	Oral	14:30 – 14:45
2	Solidification of heavy metal elements in waste phosphate acid activated metakaolin geopolymer	Kaibao Wang	Tsinghua University	Oral	14:45 – 15:00
3	Investigation of fundamental properties of geopolymer using wood ash	Mitsuki Hirose	Kochi College	Oral	15:00 – 15:15
4	Preparation and properties of green high ductility geopolymer composites incorporating recycled fine brick aggregate	Bangcheng Lyu	Southeast University	Oral	15:15 – 15:30
5	Performance of reinforced concrete beam element strengthened by fiber-reinforced geopolymer composites	Ernesto Guades	University of Guam	Oral	15:30 – 15:45
6	Development of an ecological ambient-cured one-part geopolymer utilizing municipal solid waste incineration bottom ash	Syed Farasat Ali Shah	The Hong Kong Polytechnic University	Flash	15:45 – 15:50
7	The effect of SCMs on the resistance of steam-cured concrete to chloride attack in the tidal zone of real marine environment	Tengfei Guo	Southeast University	Flash	15:50 – 15:55
8	The intrinsic change of biochar in biochar-cement based construction materials: insights from structural, chemical and mechanical properties	Weijian Xu	The Hong Kong Polytechnic University	Flash	15:55 – 16:00

Day 1: 14 Dec 2023 (Thursday)					
Session B2		Blended Cements and Hydration			Room Z207
Chairmen		Kim Hung Mo (Universiti Malaya) Lei Wang (Zhejiang University)			14:00 – 16:05
Invited speech: Research on the retardation mechanism of steel slag on the early-age hydration and setting of cement Qiang Wang (Tsinghua University)					14:00 – 14:15
1	Understanding the impact of aluminum incorporation on C-A-S-H decalcification	Yong Tao	The Hong Kong Polytechnic University	Oral	14:15 – 14:30
2	Structural characterization of calcium aluminate hydroxides with different intercalated anions by multinuclear solid-state MAS NMR	Shuai Nei	Aarhus University	Oral	14:30 – 14:45
3	Effect of steam curing on hydration evolution of cement-based materials with recycled brick powder	Xu Luo	Southeast University	Oral	14:45 – 15:00
4	Reaction mechanism of clinker-free binder with biomass fly ash and slag	Xuhui Liang	Delft University of Technology	Oral	15:00 – 15:15
5	Toward performance improvement of excess-sulfate phosphogypsum slag cement by polyaluminum chloride: Synchronous regulation of the formation of ettringite and C-(A)-S-H gels	Xiang Liu	Wuhan University of Technology	Oral	15:15 – 15:30
6	Process compatible desulfurization of NSP cement production: A novel strategy for efficient capture of trace SO ₂ and the industrial trial	Tongsheng Zhang	South China University of Technology	Oral	15:30 – 15:45
7	Volume stability of low-carbon magnesium silicate hydrate cementitious system	Tingting Zhang	Dalian University of Technology	Oral	15:45 – 16:00
8	Effects of seawater on the hydration, properties, and structure of aluminate phases in cement	Yamei Cai	The Hong Kong Polytechnic University	Flash	16:00 – 16:05

Day 1: 14 Dec 2023 (Thursday)					
Session B3		Carbonatable Systems and Sustainability			Room Z209
Chairmen		Lapyote Prasittisopin (Chulalongkorn University) Jun Ren (Yunnan University)			14:00 – 16:05
Invited speech: Improving the hydration activity and volume stability of the RO phases in steel slag by combining alkali and wet carbonation treatments Jun Chang (Dalian University of Technology)					14:00 – 14:15
Invited speech: Deep stabilization of soft clay soil with a low-CO ₂ binder generated from waste streams of pulp and paper mills Minna Sarkkinen (Tapojärvi Oy)					14:15 – 14:30
1	Upcycling waste powder into supplementary cementitious materials through a two-step wet carbonation process	Xiaoliang Fang	Ningbo University	Oral	14:30 – 14:45
2	Methods for evaluating carbonation degree of steel slag, C ₃ S and carbide slag	Qi Zhang	Southeast University	Oral	14:45 – 15:00
3	Simulation of flue gas for curing cement compacts: Influence of gas impurities	Hao Yu	Hunan University	Oral	15:00 – 15:15
4	Effect of pressurized carbonation duration on properties of recycled aggregate concrete	Long Li	Tongji University	Oral	15:15 – 15:30
5	Carbon(ate) cement: dream or reality?	Min Wu	Aarhus University	Oral	15:30 – 15:45
6	From waste to valuable products: investigation of carbonation processes within the “BBCIRCLE” project	Alessandra Masi	University of Rome Tor Vergata	Flash	15:45 – 15:50
7	First 60 min behavior of fresh properties and reaction mechanisms of cement pastes intermixed with CO ₂	Shuang Luo	Hunan University	Flash	15:50 – 15:55
8	Green recycling of CFRP composites in atmospheric environment	Xiangfei Wang	Shenzhen University	Flash	15:55 – 16:00
9	Accelerated carbonation of recycled concrete aggregate in semi-wet environments: A promising technique for CO ₂ utilization	Yining Gao	The Hong Kong Polytechnic University	Flash	16:00 – 16:05

Day 1: 14 Dec 2023 (Thursday)					
Session B4		Waste Treatment and Enhancement			Room Z211
Chairmen		Ming-Zhi Guo (Shaoxing University) Theodore Hanein (University of Sheffield)			14:00 – 16:05
Invited speech: The utilization of recycled concrete aggregates for pavement engineering applications: A state-of-the-art review Jie Ji (Beijing University of Civil Engineering and Architecture)					14:00 – 14:15
1	Mechanical properties and microscopic mechanisms of LBM-GGBS solidified saline soil in seasonally frozen areas	Ming-Zhi Guo	Shaoxing University	Oral	14:15 – 14:30
2	Enhanced long-term volume stability of carbonated steel slag blocks with reduced iron content: An investigation under accelerated degradation and natural environment conditions	Lei Gu	Changzhou Architectural Research Institute Group Co., Ltd.	Oral	14:30 – 14:45
3	Promotion and technical study for the wider use of GGBS concrete in the construction industry for reducing carbon emission	Jackie C.K. Leung	Civil Engineering and Development Department, The Government of the HKSAR	Oral	14:45 – 15:00
4	Equipment and treatment process of decoration waste: An investigation of Shanghai	Minjie Hou	Tongji University	Oral	15:00 – 15:15
5	Value-added recycling of waste polypropylene into performance-enhancing bitumen modifiers through melting degradation-grafting reactions	Tianqi Hu	Wuhan University of Technology	Oral	15:15 – 15:30
6	Theory and application of civil functional materials prepared by red mud with multisource solid waste	Jian Zhang	Shandong University	Oral	15:30 – 15:45
7	Utilization of low-grade glass as a partial replacement of cementitious materials and river sand in ultra-high performance concrete	Xudong Zhao	The Hong Kong Polytechnic University	Flash	15:45 – 15:50
8	Enchantment of architectural luminescent-glass mortar (ALM) properties with encapsulation of white-color powder	Jinxin Wei	Hunan University	Flash	15:50 – 15:55

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9	Production of lightweight aggregates from waste glass and incinerated sewage sludge ash	Yujie Huang	The Hong Kong Polytechnic University	Flash	15:55 – 16:00
10	Blending efficiency of reclaimed asphalt rubber pavement and its cracking resistance	Danning Li	The Hong Kong Polytechnic University	Flash	16:00 – 16:05

Day 2: 15 Dec 2023 (Friday)					
Session C1		Sustainable Concrete and Characterization			Room Z205
Chairmen		Joan Formosa Mitjans (Universitat de Barcelona) Bo Li (University of Nottingham Ningbo China)			10:45 – 12:30
Invited speech: Insight into the mechanism underlying steel corrosion resistance of waste glass powder-ordinary Portland cement (WGP-OPC) blends Yuxi Zhao (Zhejiang University)					10:45 – 11:00
1	Mechanical property prediction models for RCA with RAs from different sources	Yue Geng	Harbin Institute of Technology	Oral	11:00 – 11:15
2	Self-healing concrete using sustainable centrosphere-based artificial aggregate	Leyang Lv	Shenzhen University	Oral	11:15 – 11:30
3	Development of mortars using magnesium phosphate cement formulated with tundish descaling as a MgO source	Anna Alfocea-Roig	Universitat de Barcelona	Oral	11:30 – 11:45
4	Data-driven design of headed-stud connections in steel-recycled aggregate concrete composite floors using polynomial chaos expansions	Qiuni Fu	University of Luxembourg	Oral	11:45 – 12:00
5	Next generation concrete materials	Mohamed Katish	University of Bath	Oral	12:00 – 12:15
6	Performance-orientated construction material design with invertible neural networks	Jie Yu	The Hong Kong Polytechnic University	Oral	12:15 – 12:30

Day 2: 15 Dec 2023 (Friday)					
Session C2		Recycling of Ashes			Room Z207
Chairmen		Satoshi Mizutani (Osaka Metropolitan University) Pei Tang (Wuhan University of Technology)			10:45 – 12:30
Invited speech: Designing low-carbon cementitious materials for stabilization/solidification of MSWI fly ash					10:45 – 11:00
Lei Wang (Zhejiang University)					
1	The application of bio-treated municipal solid waste incineration fly ash from microbial isolates in magnesium phosphate cement	Jun Ren	Yunnan University	Oral	11:00 – 11:15
2	Valorization of fly ash to produce geopolymer sphere as a potential adsorbent in removing cadmium ions from wastewater	Tee How Tan	Tunku Abdul Rahman University of Management and Technology	Oral	11:15 – 11:30
3	Safe disposal and resource utilization of municipal solid waste incineration fly ash	Yu Gao	China University of Mining & Technology (Beijing)	Oral	11:30 – 11:45
4	Evaluation of mechanical and leaching properties and carbon fixation of carbonated incineration bottom ash	Yuma Otsuka	Fukuoka University	Oral	11:45 – 12:00
5	MSWI fly ash conversion and preparation of cementitious materials: solidification mechanism of heavy metal Pb	Fuli Liu	China University of Mining & Technology (Beijing)	Flash	12:00 – 12:05
6	Recycling of incinerated sewage sludge ash and waste glass powder in cementless binders for sewer rehabilitation	Hafiz Asad Ali	The Hong Kong Polytechnic University	Flash	12:05 – 12:10
7	Use of fly ash in promoting carbonation of steel slag block	Jie Li	Hunan University	Flash	12:10 – 12:15
8	Employment of silica fume in the interfacial transition zone in high-volume fly ash concrete	Soufian El Mghari	Yanshan University	Flash	12:15 – 12:20
9	Influence of fly ash on the early-stage hydration kinetics of Portland cement	Jionghuang He	The Hong Kong Polytechnic University	Flash	12:20 – 12:25

Day 2: 15 Dec 2023 (Friday)					
Session C3		CO₂ Sequestration and Sustainability			Room Z209
Chairmen		Miren Etxeberria (Universitat Politècnica de Catalunya. BarcelonaTECH) Yunpeng Liu (Wuhan University of Technology)			10:45 – 12:30
Invited speech: Utilization of recycled materials in concrete to promote sustainability Xijun Shi (Texas State University)					10:45 – 11:00
1	Preparation of reactive carbonated recycled concrete fine and its utilization in ordinary Portland cement	Peiliang Shen	The Hong Kong Polytechnic University	Oral	11:00 – 11:15
2	Insights on magnesium slag superfine-grinding: the roles of Mg exposure and unexpected carbonization during grinding on cement hydration	Rui Sun	The Hong Kong Polytechnic University	Oral	11:15 – 11:30
3	Novel synthetic sol-gel glasses as sustainable supplementary cementitious binders	Chuqing Jiang	University of Oulu	Oral	11:30 – 11:45
4	Lightweight, permeable, and CO ₂ -sequestering concrete blocks enabled by the combination of reactive magnesium cement and recycled bio-mass	Yihong Tang	The Hong Kong University of Science and Technology	Oral	11:45 – 12:00
5	Turning steel slag into a value-added cement material via early-age ambient pressure carbonation curing	Xiangping Xian	City University of Hong Kong	Oral	12:00 – 12:15
6	Production of pure vaterite via leaching-carbonation of BOFS	Qifeng Song	Hunan University	Flash	12:15 – 12:20
7	Mechanochemical carbonation of recycled concrete fines: Towards a high-efficiency recycling and CO ₂ sequestration	Yingliang Zhao	The Hong Kong Polytechnic University	Flash	12:20 – 12:25
8	Utilizing waste cement for carbon dioxide sequestration and capture: The role of water content on the growth of calcium carbonate during the carbonation process of hydrated cement	Zihan Ma	The Hong Kong Polytechnic University	Flash	12:25 – 12:30

Day 2: 15 Dec 2023 (Friday)					
Session C4	Waste Utilizing in Concrete				Room Z211
Chairmen	Josep Ma. Chimenos (Universitat de Barcelona) Xiaoliang Fang (Ningbo University)				10:45 – 12:30
Invited speech: Evaluation of durability and environmental safety of coal ash-steel making slag mixed material applied to base course material Takuro Fujikawa (Fukuoka University)					10:45 – 11:00
1	Assessment of chloride transport in metakaolin-fly ash-limestone blended cementitious materials	Shiyu Sui	Qingdao University of Technology	Oral	11:00 – 11:15
2	Development of low-carbon high-performance lightweight concrete with waste materials	Jian-Xin Lu	The Hong Kong Polytechnic University	Oral	11:15 – 11:30
3	Methodology to evaluate with suitability of secondary sand aggregates for the use in concrete: Valorisation of a normative study in Belgium	Nicole Dilissen	Buildwise	Oral	11:30 – 11:45
4	Improving the interfacial transition zone of high-volume fly ash concrete using response surface methodology	Tianyu Xiao	Yanshan University	Oral	11:45 – 12:00
5	Valorisation of glass and aluminium recycling wastes as alkali-activated binder precursors	Jofre Mañosa Bover	Universitat de Barcelona	Oral	12:00 – 12:15
6	Influence of treatment methods and gradation of recycled aggregate from Construction Demolition Waste (CDW) for a Greener Concret	Madhavi Latha Kasulanati	National Institute of Technology, Warangal	Oral	12:15 – 12:30

Day 2: 15 Dec 2023 (Friday)					
Session D1	Fibre Reinforced Materials				Room Z205
Chairmen	Takuro Fujikawa (Fukuoka University) Zhanggen Guo (Nanjing Tech University)				14:00 – 16:00
Invited speech: Utilisation of electrolytic manganese residue as a sulphate activator in producing concrete blocks with high-volume fly ash Bo Li (University of Nottingham Ningbo China)					14:00 – 14:15
1	Advancing cementitious composites: Unleashing the potential of recycled carbon fibers for enhanced mechanical and functional performance	Chun Pei	Shenzhen University	Oral	14:15 – 14:30
2	Incorporation of calcined bauxite aggregate and micro fibrillated cellulose for improved projectile impact resistance of cementitious composites	Xianbing Ai	Southeast University	Oral	14:30 – 14:45
3	A targeted approach of using graphene oxide to enhance the interfacial transition zone in recycled aggregate concrete	Dong Lu	The Hong Kong Polytechnic University	Oral	14:45 – 15:00
4	Fresh and hardened properties of recycled steel fiber reinforced self-compacting concrete with recycled aggregates and fly ash, slag, silica fume	Zhanggen Guo	Nanjing Tech University	Oral	15:00 – 15:15
5	Physicochemical recycling of waste glass fiber-reinforced polymer into modifier for its application in asphalt pavement: Preparation and performance evaluation	Yi Luo	Wuhan Institute of Technology	Oral	15:15 – 15:30
6	Investigation of recycled carbon fiber felt as a promising material for capacitive deionization (CDI) electrodes in industrial applications	Jiuyi Liu	Shenzhen University	Flash	15:30 – 15:35
7	Geotechnical applicability of cement-stabilized fiber-reinforced incinerator bottom ash composites	Sanjeev Kumar	Dr BR Ambedkar National Institute of Technology Jalandhar	Flash	15:35 – 15:40
8	Designing magnesium phosphate cement for stabilization/solidification of Zn-rich electroplating sludge	Yuying Zhang	The Hong Kong Polytechnic University	Flash	15:40 – 15:45
9	A zero-waste strategy to transform Bayer red mud into clean glass fiber and cast iron	Ziwei Chen	The Hong Kong Polytechnic University	Flash	15:45 – 15:50

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10	Effect of waste glass powder on improving the resistance ability of elevated temperature for ultra-high performance concrete	Weichen Tian	The Hong Kong Polytechnic University	Flash	15:50 – 15:55
11	Preparation and characterization of porous glass lightweight aggregate	Weiyi Ji	The Hong Kong Polytechnic University	Flash	15:55 – 16:00

Day 2: 15 Dec 2023 (Friday)					
Session D2		Alkali Activation and Artificial Aggregates			Room Z207
Chairmen		Yue Geng (Harbin Institute of Technology) Xijun Shi (Texas State University)			14:00 – 16:00
Invited speech: Artificial aggregates derived from solid wastes Pei Tang (Wuhan University of Technology)					14:00 – 14:15
Invited speech: Sustainable alternative aggregate from MSWI bottom ash through granulation and alkali activation Priyadharshini Perumal (University of Oulu)					14:15 – 14:30
1	Preparation of glass-ceramic-based artificial aggregates using multiple solid wastes	Yunpeng Liu	Wuhan University of Technology	Oral	14:30 – 14:45
2	Development of alkali-activated concrete using MSWI bottom ash as coarse aggregates for sustainable road construction	Boyu Chen	Delft University of Technology	Oral	14:45 – 15:00
3	Potential of palm oil fuel ash in the production of cold-bonded lightweight aggregates by one-part alkali-activated method	Kim Hung Mo	Universiti Malaya	Oral	15:00 – 15:15
4	Modification of recycled coarse aggregate using enzyme-induced carbonate precipitation (EICP) technology	Bingcheng Chen	Zhejiang University	Oral	15:15 – 15:30
5	Low-carbon alkali-activated slag for ultra-durable concrete infrastructure	Hailong Ye	The University of Hong Kong	Oral	15:30 – 15:45
6	Ultra-stabilized foam improved by amphiphilic nano silica for foam concrete	Chunpeng Zhang	The Hong Kong Polytechnic University	Flash	15:45 – 15:50
7	Utilization of contaminated air pollution control residues for the preparation of alkali/sulfate-activated slag/glass powder	Keke Sun	The Hong Kong Polytechnic University	Flash	15:50 – 15:55
8	The potential use of carbonated recycled concrete fines with sodium meta-aluminate for synthesizing alkali-activated materials	Weiwei Chen	The Hong Kong Polytechnic University	Flash	15:55 – 16:00

Day 2: 15 Dec 2023 (Friday)					
Session D3		Contaminant Leaching and Environmental Impact			Room Z209
Chairmen		Ute Kalbe (Federal Institute for Materials Research and Testing) Zengfeng Zhao (Tongji University)			14:00 – 16:00
Invited speech: Evaluation of the utilisation potential of products from bottom ash treatment via a risk-based methodology based on the results of leaching and ecotoxicological tests Giulia Costa (University of Rome Tor Vergata)					14:00 – 14:15
1	Leaching behavior of polychlorinated naphthalenes from incineration fly ash: Evaluation based on percolation test using humic acid as a leachant	Satoshi Mizutani	Osaka Metropolitan University	Oral	14:15 – 14:30
2	Environmental impact of monolithic Portland cement versus hybrid cement using dynamic surface leaching test	Iván Salas	University of Cantabria	Oral	14:30 – 14:45
3	Producing clinker from metallurgical waste: The contamination problem	Theodore Hanein	University of Sheffield	Oral	14:45 – 15:00
4	Binary heterojunctions of Mg/Al-LDH and carbon-based matrixes derived from self-assembly synthesis for inhibition of pyrene photopolymerizing: Elucidation of LDHs protecting bitumen against UV aging	Xinyu Cong	Harbin Institute of Technology	Oral	15:00 – 15:15
5	Environmental assessment of alkali-activated materials based on biowaste ashes as silica source using horizontal leaching tests	Iván Salas	University of Cantabria	Oral	15:15 – 15:30
6	Solidification/stabilization and immobilization mechanism of Pb(II) and Zn(II) in ettringite	Chengcheng Fan	Dalian University of Technology	Oral	15:30 – 15:45
7	Sustainable reuse of modified incineration sewage sludge ash (M-ISSA) for stabilization of highly As-contaminated soil	Shengya Gao	The Hong Kong Polytechnic University	Flash	15:45 – 15:50
8	Building a sustainable future: Evaluating environmental impact and eco-efficiency of prefabricated vs. cast-in-situ construction in rapidly urbanizing India	Harshal Tikam	Indian Institute of Technology Kanpur	Flash	15:50 – 15:55
9	Eco-cement synthesized from municipal solid waste incineration bottom ash and recycled concrete fine	Hanxiong Lyu	The Hong Kong Polytechnic University	Flash	15:55 – 16:00

Day 2: 15 Dec 2023 (Friday)					
Session D4		Life Cycle Assessment and Others			Room Z211
Chairmen		Yuxi Zhao (Zhejiang University) Shipeng Zhang (The Hong Kong Polytechnic University)			14:00 – 16:00
1	Integration of uncertainty and variability analysis in life cycle assessment of coal gangue composite cement	Lufan Li	Hangzhou City University	Oral	14:00 – 14:15
2	Eco-toxicity assessment of sustainable magnesium phosphate cements (Sust-MPCs) using luminescent bacteria and sea urchin embryogenesis bioassays	Eva Cifrian	University of Cantabria	Oral	14:15 – 14:30
3	Technical feasibility and life cycle assessment for turning corn straw wastes into supplementary cementing materials of cement mortars	Xiaoyu Shang	Northeast Electric Power University	Oral	14:30 – 14:45
4	Modification of recycled aggregates by bio-deposition treatment from the interior to the surface	Rui Zhang	Xi'an Jiaotong University	Oral	14:45 – 15:00
5	Integrated deep learning and life-cycle cost analysis model to estimate the sustainability of tall buildings in Hong Kong with the climate change impacts	Siqi Cao	The Hong Kong University of Science and Technology	Flash	15:00 – 15:05
6	A roadmap for environmental assessment in building construction: Integrating LCA with India-specific footprint	Abhiram Shukla	Indian Institute of Technology Kanpur	Flash	15:05 – 15:10
7	Life-cycle assessment of low and high water mixed cement pastes: Comparative study of fast-curing methods	Xin Shao	Hunan University	Flash	15:10 – 15:15
8	A novel foaming-sintering technique for developing eco-friendly lightweight aggregates for high performance concrete	Zuwang Bian	The Hong Kong Polytechnic University	Flash	15:15 – 15:20
9	A new superhydrophobic interface construction technology for low carbon concrete: In-situ self-generation of micro-/nano-structures	Long Jiang	The Hong Kong Polytechnic University	Flash	15:20 – 15:25
10	Study on chemical method to simulate the cementitious property of steel slag	Wenzheng Li	Dalian University of Technology	Flash	15:25 – 15:30

11	Fractal hydration evolution of a sustainable low water/binder cementitious composite: Experiments and simulation	Kangning Liu	The Hong Kong Polytechnic University	Flash	15:30 – 15:35
12	Rapid CO ₂ catalytic activation of binary cementing system of CSA and Portland cement	Yang Liu	The Hong Kong Polytechnic University	Flash	15:35 – 15:40
13	Preparation of reactive seedings by in situ precarbonation under power ultrasound-assisted mixing: Enhancing the hydration and mechanical properties of OPC	Guangqi Xiong	The Hong Kong Polytechnic University	Flash	15:40 – 15:45