

Preliminary Technical Program

Beneficiation of Phosphates X

An ECI Conference Series

November 2 – 8, 2025

Hanoi, Vietnam

Chair

Dr. Patrick Zhang

**FIPR Industrial and Phosphate Research Institute
Florida Polytechnic University**

Co-Chairs

**Phong Vo
Ardaman & Associates, USA**

**Erika Rova
Yara Suomi Oy, Finland**

**André Carlos Silva
Federal Univ. Catalão, Brazil**

**Ewan Wingate
Bechtel Australia, Australia**

**Ruan Chi
Hubei Three Gorges Lab, China**

**Trong Dang-Vu
SNF, Canada**



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Sunday, November 2, 2025

17:00 – 18:00	Registration
18:00 – 19:00	Welcome Reception
19:00 – 21:30	Dinner

Monday, November 3, 2025

07:00 – 08:30	Breakfast
08:30 – 08:40	<u>Welcoming Remarks</u> Dr. Nga Nguyen, Hanoi University of Mining and Geology, Vietnam
08:40 – 08:50	<u>Opening Remarks</u> Patrick Zhang, FIPR Institute, Florida Polytechnic University, USA
08:50 – 09:00	<u>ECI & Vital Conference Information</u> Kevin Korpics, ECI, USA
09:00 – 12:05	<u>Session I. Flotation I</u> Session Co-chairs: Ashma Singh and Thanh Hai Pham
09:00 – 9:30	<i>Keynote One: Synergistic effects of non-ionic reagents on direct and reverse flotation of carbonate-rich phosphate ores</i> Lev Filippov, University of Lorraine, France
09:30 – 09:55	Functionalized polystyrene-based nanoparticles as phosphorite flotation collectors: I: Adsorption isotherm Salah Al-Thyabat, Al-Hussein Bin Talal University, Jordan
09:55 – 10:20	The silicon removal from collophane using double reverse flotation process enhanced by novel compound cationic collector Dongping Tao, Shandong University of Technology, Zibo, China
10:20 – 10:50	Coffee Break
10:50 – 11:15	Comparative assessment of wide versus discrete size fractions - the Crago Process for the upgrade of sedimentary phosphate ore Ashma Singh, Mintek, South Africa
11:15 – 11:40	Effect of change in %solids on upgrade performance of sedimentary phosphate Nichole Maistry, Mintek, South Africa
11:40 – 12:05	Mining, beneficiation, and processing of phosphate raw materials based on NIUIF JSC solutions Irina Kurachka, PhosAgro Group NIUIF JSC, Russia
12:05 – 13:30	Lunch

Monday, November 3, 2025 (continued)

14:00 – 17:30	<u>Session II: Recovery of Critical Materials</u> Session Co-Chairs: Salah Al-Thyabat and Haijun Liang
14:00 – 14:30	TBA
14:30 – 15:00	Processing of amine flotation tails for REE and P recovery Haijun Liang, FIPR, Florida Poly, USA
15:00 – 15:30	TBA
15:30 – 16:00	Coffee break
16:00 – 16:30	Upgrading and valuable extractions from Jordanian phosphate slime Habis Al-Zoubi, Hussein Bin Talal University, Jordan
16:30 – 17:00	Processing flowsheet development for REE recovery from phosphoric acid sludge Patrick Zhang, FIPR, Florida Poly, USA
17:00 – 19:00	Free time / networking
19:00 – 20:30	Dinner
20:30 – 21:30	Social Hour

Tuesday, November 4, 2025

07:00 – 08:30	Breakfast
08:30 – 12:00	<u>Session III: Phosphogypsum Management and Utilization</u> Session Co-Chairs: Julian Hilton and Phong Vo
08:30 – 09:00	<i>Keynote two: From waste to inventory - An overview of the IFA phosphogypsum working group program and successful stories</i> Julian Hilton, Aleff Group, UK
09:00 – 09:30	TBA
09:30 – 10:00	Current status of research and use of phosphogypsum (PG) in Vietnam: A preliminary case study to orient processing technology Thanh-Hai Pham, Hanoi University of Mining and Geology, Vietnam
10:00 – 10:30	Coffee break
10:30 – 11:00	Conversion of phosphogypsum into calcium carbonate Haijun Liang, Florida Industrial & Phosphate Research Institute / Florida Poly, USA
11:00 – 11:30	Foreseeing the unforeseen in management of phosphate mine & processing plant waste disposal Phong Vo, Ardaman & Associates Inc. A Tetra Tech Company, USA
11:30 – 12:00	Polymer-enhanced geotextile dewatering systems for phosphogypsum stack closure management – A case study Trong Dang-Vu, NSF Mining, Canada
12:00 – 13:30	Lunch
Afternoon	Free time
19:00 – 20:30	Dinner
20:30 – 21:30	Social Hour

Wednesday, November 5, 2022

07:00 – 08:30	Breakfast
08:30 – 12:00	<u>Session IV: Hydrometallurgical Processing</u> Session Co-Chairs: Trong Dang-Vu and Nichole Maistry
08:30 – 09:00	Experience and prospects of joint processing of Phosphogypsum and Fluorosilicic Acid to obtain Ammonium Sulfate and Synthetic Calcium Fluoride Maksim Tsikin, PhosAgro Group NIUIF JSC, Russia
09:00 – 09:30	TBA
09:30 – 10:00	Enhancing belt filter performance with advanced polymer solutions: A case study from a Middle Eastern phosphate plant Trong Dang – Vu, SNF, Canada
10:00 – 10:30	Coffee break
10:30 – 11:00	Overview of mining, processing and using Apatite ore in Vietnam Thi Kim Dung Nhu, Hanoi University of Mining and Geology, Vietnam
11:00 – 11:30	Brazil's National Fertilizer Plan: Aspects of the technology used in apatite concentration and potential projects to increase phosphate rock production Elves Matiolo, Centro de Tecnologia Mineral (CETEM/MCTI), Brazil
12:00 – 13:30	Lunch
14:00 – 20:30	Conference Cultural Excursion with dinner included <i>Guided tour of Hanoi and taste of authentic Vietnamese foods</i>

Thursday, November 6, 2025

07:00 – 08:30	Breakfast
08:30 – 10:00	<u>Session V: Waste Treatment and Sustainable Development</u> Session Co-Chairs: Said Mansouri and Irina Kurochka
08:30 – 09:00	Phosphogypsum Treatment Process Guoxin Wang, Arkema, USA
09:00 – 9:30	Double flotation and purification of phosphogypsum Wending Xiao, Hubei Bonan Technology Co., Ltd, China
09:30 – 10:00	A high efficiency P-fertilizer made from low grade ore without acid Zongwen Liao, South China Agricultural University, China
10:00 – 10:30	Addressing the economic and regulatory issues with REE recovery from Florida phosphogypsum Patrick Zhang, Florida Poly. USA
10:30 – 11:00	Coffee break
11:00 – 12:30	<u>Session VI: Flotation II</u> Session Co-Chairs: Lev Filippov and Daniel Tao
11:00 – 11:30	Overview of Apatite-carbonate ore beneficiation studies in Lao Cai, Vietnam Thanh-Hai Pham, Hanoi University of Mining and Geology, Vietnam
11:30 – 12:00	TBA
12:30 – 12:30	Studying the mechanical floating process in floating apatite ores type III Lao Cai, Vietnam Van Duoc Tran, Hanoi University of Mining and Geology, Vietnam
12:30 – 14:00	Lunch
14:00 – 17:00	<u>Ad hoc topical discussions</u> Phosphogypsum - Facilitators: Phong Vo Julian Hilton Critical elements - Facilitators: Said Mansouri and Patrick Zhang
19:00 – 21:00	Conference Banquet
<u>Optional Tour – Separate registration and fee apply to tours below</u>	
22:00	Departure for Conference technical Excursion (overnight train ride to Lao Cai)

Friday, November 7, 2025

Optional Tours – Separate registration and fee apply to tours below

06:45 – 11:00	Tour of phosphate mine and acid plant
11:30 – 22:00	Tour of Tour of SAPA and overnight stay in SAPA

Saturday, November 8, 2025

08:00 – 20:00	Tour of Fansipan and CAT CAT Village
22:30	Overnight train ride back to Hanoi