



“Make a better world with PM”
WORLD PM2024 in YOKOHAMA Japan



WORLD PM2024

Powder Metallurgy
World Congress & Exhibition
13-17 October 2024 YOKOHAMA, JAPAN

CALL FOR PAPERS
Deadline for Abstract Submission:
15 January 2024

Organized by Japan Powder Metallurgy Association (JPMA) Japan Society of Powder and Powder Metallurgy (JSPM)
Supported by European Powder Metallurgy Association (EPMA) Metal Powder Industries Federation (MPIF)
Asian Powder Metallurgy Association (APMA)

www.worldpm2024.com



2023
August



Newsletter

Asian Powder Metallurgy Association

Japan JPMA / JSPM · Korea KPMA / KPMI · Taiwan TPMA · India PMAI · China CPMS / CPMA · Thailand Thai PMA

I believe everyone's country has recovered from the COVID-19 pandemic that lasted over three years. In the post-COVID-19 era, factors such as the continuation of the Russo-Ukrainian War, rampant inflation, the China-United States trade war, reshuffling of the transportation and logistics industry, changes in the business activities of various industries, and the impact of EVs on the powder metallurgy industry have changed the global supply chain. In addition, the concept of ESG and net zero campaigns around the world have directly or indirectly influenced our lives. From now on, our challenges ahead may not necessarily be easier than before the pandemic.

The Asia Powder Metallurgy Association (APMA), which organized virtually no exchange activities over the last three years or so, will resume operation this year. It has been almost four years since the APMA 2019 in India. Originally scheduled to be held by the Korean Powder Metallurgy & Materials Association (KPMI) and the Korea Materials Association (KPCA) in 2021, the APMA annual conference will finally be held at Hwabaek International Convention Center (HICO) in Gyeongju, Korea from November 27 to 30. I look forward to meeting everyone to catch up again. I invite all member countries to send delegates and their families to attend the conference as there will be various exhibitions this year as usual.

Furthermore, I hope everyone can take advantage of the Global PM Property Database (GPPD), a joint endeavor of the APMA, EPMA (Europe Powder Metallurgy Association), and MPIF (Metal Powder Industry Federation), to facilitate our data integration and endow the database with more value.

Last but not least, I believe everyone is aware that the biennial Powder Metallurgy World Congress & Exhibition, World PM2024 Yokohama, Japan, will take place in Yokohama between October 13 and 17, 2024. This is not only a major event in the powder metallurgy industry but also in the Asian powder metallurgy industry. Led by the professionalism of the organizer, Japan Powder Metallurgy Association, let us work as a team to see the success of the event. Everyone is cordially invited to join us in the grand event.



Asia Powder Metallurgy Association
President

C. L. Chu



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2nd Announcement & Call for papers
**6th International Conference and Exhibition
 on Powder Metallurgy in Asia**

APMA 2023
Nov 27(Mon) ~ Nov 30(Thu), 2023
HICO Gyeongju, Korea

**6th International Conference and Exhibition
 on Powder Metallurgy in Asia**

Invitation

On behalf of the organizing committee, we would like to cordially invite all of you to the 6th International Conference and Exhibition on Powder Metallurgy in Asia branded as APMA 2023, which will be held in Gyeongju, Korea, from November 27 to 30, 2023.

APMA 2023 will be organized by The Korean Powder Metallurgy & Materials Institute (KPMI) in cooperation with the Korean Powder Metallurgy & Materials Association (KPMA) under endorsement of the Asian Powder Metallurgy Association (APMA) focusing on the latest advances and issues in the science and technology of powder metallurgy and the related PM markets of Asian PM industries. The series conferences were extended from Jeju, Korea in 2011, Xiamen, China in 2013, Kyoto, Japan in 2015, Hsinchu, Taiwan in 2017 and Pune, India in 2019.

Conference sessions will include invited lectures from internationally distinguished scientists discussing topics ranging from the most recent discovered powder metallurgy to the latest techniques of production. Manufacture's contributions and exhibits are welcome to promote further interaction between the scientists and the industry. Registration and contributions for the conference in the form of oral or poster presentations are warmly invited and is open to all.

Dr. Ji-Hun Yu
 Mr. Kun-Jin Lee

Chairmen of Organizing Committee
 6th International conference and exhibition
 on Powder Metallurgy in Asia

Conference Information

Title	6th International Conference and Exhibition on Powder Metallurgy in Asia
Period	November 27 - November 30, 2023
Venue	Hwabaek international convention center(HICO), Gyeongju, Korea
Hosted by	Korean Powder Metallurgy & Materials Institute (KPMI) Korean Powder Metallurgy & Materials Association (KPMA)

Conference Scope

The scope of the conference will cover:

- ◆ Powder Metallurgy
- ◆ Additive Manufacturing (3D Printing)
- ◆ Powder Injection Molding (PIM)
- ◆ Compaction, Shape Forming, Sintering
- ◆ PM Materials Processing, Characterization and Modeling
- ◆ PM Production Management

The conference will also include:

- ◆ APMA Board Meeting
- ◆ Opening Ceremony
- ◆ End User Plenary Lecture (automobiles & electronics)
- ◆ Forum on PM Activity in Asia (Member's countries)
- ◆ Advanced Technical Programs (Oral sessions & Poster session)

Exhibition

The organizing committee of APMA2023 kindly invites world-renowned powder metallurgy association staffs and equipment manufacturers to exchange information on relevant market trends and leading edge technologies. The booth specifications are as follows:

- Exhibition location : 1 Floor on conference hall in HICO
- Exhibition period : Nov. 27 ~ Nov. 29, 2023
- Exhibition rates : 2,000USD / booth equipped with 3Mx3Mx2M size stall and electricity
- One person for booth will be entitled to complementary delegate registration.
- For stall booking, please email kpmi@kpmi.or.kr before August 31, 2023.

Organizing Committee

General Chairs

Dr. Ji-Hun Yu (President of KPMI, Korea)
 Mr. Kun-Jin Lee (President of KPMA, Korea)

Secretary General

Prof. Jin-Chun Kim (Vice President of KPMI, Korea)
 Mr. Winfred Oh (Secretary General of KPMA, Korea)

Honorary International Advisory Committee

Chair : Chiu-Lung Chu		
Hiroshi Ii	Shuzo Sonoda	Ji-Hun Yu
Kun Jin Lee	Chou Chung Shaw	Anike Gore
Baiyun Hunag	Shaoming Zhang	Pramote Elangkhunchorn

Advisory Committee

Suk-Joong L. Kang	Jai-Sung Lee	Soon Hyung Hong
In-Shup Ahn	Jung-Ho Ahn	Yoo Dong Hahn
Byoung Kee Kim	Hyung Seop Kim	Sung-Tag Oh
Yong Ho Choa	Hwi-Jun Kim	

Local Organizing Committee

Chair : Chang Kyu Rhee		
KPMI : Taek-Soo Kim	Kee-Ahn Lee	Jung Goo Lee
Jong Ku Park	Si-Young Chang	Hyun Seon Hong
Bum Sung Kim	Man Sik Kong	Ho Jin Ryu
Sangsun Yang	Jung-Yeul Yun	Se Hoon Kim
Young-In Lee	Young Bum Chun	Suk Hoon Kang
Min Chul Kang	Hyunjoo Choi	Young Moo Kim
Bin Lee	Jin Kyu Lee	
KPMA : Byung Yoon Lee	Joon Park	Dong Gil Ahn
Jong Kwan Park	Byungkoon Park	Kwangho Song
Dae Kun Park	Soo Wook Lee	Jong Oh Lee
Youngho Kim	Wooseok Han	

Publication Committee

Editor in Chief : Kyung-Tae Kim		
Jeoung Han Kim	Se Hun Kwon	Tae Joo Park
Soon-Jik Hong	Jongmin Byun	Seong Keun Kim
Jae Bok Seol	Dongju Lee	Seok-Jae Lee
Se Eun Shin	Byung Joon Choi	MinHo Yang
Changui Ahn	Jeong Min Park	Sung-Soo Ryu
In-Hyuck Song	Hyunjoo Choi	

Call for Abstracts and Papers

The organizing committee of APMA2023 invites all interested individuals to submit abstracts to be considered for oral/poster presentation. The presentation will be grouped according to the symposia listed above. Anyone who is interested in oral/poster presentation should submit an abstract no later than by August 31, 2023. Abstract should be submitted on-line only through the conference website (www.apma2023.org). It is planned that only completed research papers and technical reviews by the deadline will be published in the Journal of Korean Powder Metallurgy & Materials Institute (KPMI) and Journal of Archives of Metallurgy and Materials (AMM) after peer review.

Important Dates

- Abstract submission	August 31, 2023
- Exhibition stall reservation	August 31, 2023
- Early registration	August 31, 2023
- Full paper due (non-mandatory)	December 30, 2023

Registration Fee

	Early (Until 31 August 2023)	On-site (1 Sep to 30 Nov 2023)
Regular	USD 400	USD 500
Student	USD 200	USD 250
Accompanying person	USD 200	

※ For more information contact the conference secretariat



**APMA Secretariat
 Korean Powder Metallurgy & Materials Institute(KPMI)**

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Main activities of 2022 of CPMA

2022 China Advanced Materials Industry Fair



4th South China International Summit on Technology and Application of Injection Molding and Additive Manufacturing



2022 Technology Roadshow of Powder Metallurgy (Baotou special performance)



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Shaoming Zhang
President



Wei Han
Secretary General



The China Powder Metallurgy Society (CPMS) was comprised of nearly 1,000 members from prestigious higher education institutions, research institutes, enterprises, and organizations, including distinguished experts, scholars, and entrepreneurs involved in powder metallurgy technology, industrialization, and applications. The discipline of powder metallurgy stands out for its close collaboration between academy and industry, necessitating urgent partnerships between these entities and research institutions. By harnessing the expertise of skilled professionals at all levels, the CPMS establishes multidimensional think-tank clusters that bring together diverse disciplines, industries, and regions. Employing advanced and state-of-the-art scientific methods and techniques, the CPMS provides invaluable support for scientific decision-making within various government departments and affiliated entities. Through continuous expansion and exploration of disciplinary boundaries of powder metallurgy, a multitude of new techniques and high-tech applications have been achieved.

2022 Annual Work Summary of China Powder Metallurgy Society (CPMS)

I. Organization of Academic Conferences

The “National Key Laboratory of Powder Metallurgy Spring Academic Seminar 2022” was successfully held in Changsha, Hunan Province, China, on April 11, 2022. The conference utilized a combination of online and offline formats, attended by more than 200 experts and scholars from domestic and foreign universities and research institutes. The event featured stimulating academic presentations and discussions focusing on the research undertaken by the key laboratory across various departments at Central South University. In August 2022, the journal was recorded in the DOAJ (Directory of Open Access Journals) database.



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Prof. Baiyun Huang
President



Prof. Xiang Xiong
Secretary General

In recent years, the CPMS has successfully organized more than 100 academic conferences, industry-university-research collaborations, and other significant events, attracting the participation of nearly 10,000 professionals. As a representative member of the Asian Powder Metallurgy Association (APMA), the CPMS has forged strong partnerships and alliances with renowned powder metallurgy professional organizations and institutions worldwide. Through these endeavors, the CPMS has not only effectively showcased its ongoing advancements and noteworthy academic achievements but also bolstered China's international influence in the field of powder metallurgy."

On June 29, 2022, the “Online Conference on Metal 3D Printing, Additive Manufacturing, and Injection Molding Technology and Applications” was held online. The conference was initiated and hosted by MCC Nonferrous Technology Platform and MCC Nonferrous Technology Network, and attracted 300 participants. The primary objective of the conference was to facilitate the exchange of the latest technologies in metal 3D printing, additive manufacturing, and injection molding in China, thereby promoting innovation and development within the industry. The event provided a platform for the exchange and demonstration of advanced technologies and equipment from both domestic and foreign materials companies and research institutes.

The “Advancement and Exchange Meeting of Advanced Materials Innovation Alliance for Large Aircraft” was held in Changsha, Hunan Province, China, on September 1, 2022. The conference, attended by 50 participants, featured report topics covering various areas such as the customization of composite drilling tools based on artificial diamond technology, the development of 550MPa-grade high-strength aluminum alloy materials using additive manufacturing, and research on titanium alloy short-process forging and microstructure property control based on high-throughput technology.



The “2022 National Symposium on Refractory Metals and Hard Alloys” was held in Xiamen, Fujian Province, China, on September 16, 2022. The conference aimed to enhance information exchange within the field of refractory metals and hard alloys, provide timely updates on related technologies, guide technological advancements in the industry, and effectively address key concerns and challenges.

In December 2022, the “2022 International Forum on Refractory Metals and Hard Materials” took place in Changsha, Hunan Province, China. The conference served as a platform for in-depth discussions on the latest achievements and cutting-edge trends in the field of refractory metals and hard materials. The event explored the role of integrated computational materials engineering in promoting the progress and development of China’s refractory metals and hard materials industry, establishing an international exchange platform for refractory metals and hard materials. The conference invited domestic and foreign experts with extensive experience in researching and innovating in the field of refractory metals and hard materials to engage in profound exchanges and discussions on the topic of “Design, Development, and Applications of Refractory Metals and Hard Materials.”

In December 2022, the “10th China Aluminum Industry Science and Technology Development Conference and the 3rd International Aluminum Industry Summit” was held in Zhengzhou, Henan Province, China. The conference featured renowned experts, scholars, and representatives from the aluminum metallurgy and processing fields, who delivered special reports on national policies and technological development. The conference extensively and thoroughly discussed the development goals and tasks of aluminum industry science and technology, summarized recent advanced production processes and key technologies in the domestic and international aluminum industry, and provided guidance and reference for the industrial upgrading of China’s aluminum industry. The event aimed to ensure the sustainable development of the aluminum industry and the entire nonferrous metal industry, thereby enhancing the core competitiveness of enterprises.

In the latter half of December, the “China Conference on Materials Heat Treatment and Surface Engineering” was held in Xuzhou, Jiangsu Province, China. The conference aimed to elevate the level of technological innovation in the field of materials heat treatment and surface engineering in China. It promoted the latest research and technological achievements by research institutes and application units, vigorously promoted demonstration projects and experiences, enhanced core competitiveness, and improved the overall level of the new materials industry. The conference also organized related technical and product exhibitions, facilitating technical exchanges among enterprises in the heat treatment and surface engineering fields. It discussed the research and development of advanced scientific and technological achievements and engineering applications in the field of materials heat treatment and surface engineering, summarized domestic and foreign advanced experiences, and provided significant contributions to the sustainable development of China’s new materials and high-end equipment manufacturing industry.

II. Active Organization of Academic Salons and Creation of a Favorable Academic Exchange Atmosphere

Throughout the year, a total of 176 domestic and foreign experts and scholars were invited to deliver 156 academic presentations. Esteemed speakers included Professor Chris Bowen from the University of Bath in the UK, Professor Jürgen Rödel from Darmstadt University of Technology in Germany, Professor WonJong Yoo from Sungkyunkwan University in South Korea, Professor Jilt Sietsma from Delft University of Technology in the Netherlands, Professor Huang Jiaqi from Beijing Institute of Technology, and Professor Yu Yan from the University of Science and Technology of China. These academic salons enhanced the exchange between the association and high-level research institutes both domestically and internationally.



III. Implementation of Science Popularization Work

In response to the call from the Ministry of Science and Technology, the Central Propaganda Department, the National Health Commission, and the China Association for Science and Technology to hold the “2022 National Science and Technology Week,” the theme science and technology week activities titled “Walking into Science, Walking Together” were organized from May 26 to July 26. The activities attracted more than 500 participants and effectively fulfilled the role of popularizing scientific knowledge, disseminating scientific ideas, advocating scientific methods, and promoting the spirit of science.

Throughout the year, the association received over 200 visits from institutions, enterprises, and research institutes, including visits from organizations such as Commercial Aircraft Corporation of China Ltd. (COMAC), China Southern Airlines Aero Engine Co., Ltd., Huazhong University of Science and Technology, and the Foshan Municipal Government. These visits amounted to over 900 personnel interactions.



1st WORLD PM2024 Organizing Committee(Dec.)

WORLD PM2024 YOKOHAMA Organizing Committee was formed and concrete preparations started (Dec.). The Organizing Committee is composed of JPMA Chairman Mr. Ii (Diamet) as Chair, and JSPM Chairman as Vice Chair. Mr. Sonoda (Fukuda Metal Foil & Powder Co., Ltd.), the committee consists of 6 JPMA members and 5 JSPM members. The actual operational planning is done by the technical committee (JSPM) and the operating committee (JPMA). The technical chairman is Prof. Ozaki (Kyushu University), the vice chairman is Prof. Kondoh (Osaka University), and the steering committee chairman is Mr. Masumoto (Fukuda Metal Foil & Powder), Mr. Uetsuki (JPMA) as secretary general, and Mr. Inoue (JSPM) as deputy secretary general.



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Hiroshi Ii
President (2022~)



Yoshio Uetsuki
Executive Director



JPMA Activity of 2022

- 2nd MIM Education Basic Course (Mar.)(Online)
- 17th PM Information Exchange Meeting(Mar.) (Online)
- 2022 JPMA General Assembly(May)
Mr. Hiroshi Ii was elected as a new President.
- JPMA Special Session at the JSPM Spring Meeting(May.) (Online)
- 1st P/M Education Basic Course. (Jun.)(Online)
- 10th Human resources development seminar(Jul.) (Online)
- World PM2022 Congress & Exhibition at Lyon(Oct.)
- 2022 JPMA Fall General Assembly (Oct.)
- 40th Case Studies of Production Efficiency Improvement Meeting and the 25th Metal Powder and Equipment PR Meeting(Nov.)(Online)
- 9th Metal Japan EXPO, MIM PR Seminar.

The new activity scheduled in 2023.

2024 Powder Metallurgy World Congress & Exhibition, organized by Japan Powder Metallurgy Association and Japan Society of Powder and Powder Metallurgy will be held in Yokohama, Japan, from October 13 to 17, 2024.

We look forward to your participation in the congress to “Make a better world with PM”.

Call for Papers

Abstract Submission

Start from: 16 October 2023

Deadline: 15 January 2024

Topics of Technical Sessions (Oral or Poster)

1. PM TECHNOLOGY

- Powder Production
- Processing
- Industrial Application

2. PM MATERIALS

- Sintered Materials
- Hard Materials
- Functional Materials
- Other PM Materials

3. HOT TOPICS FOR THE BETTER WORLD

- Carbon Neutral (CN) in PM (ECO Processes, ECO Materials)
- Circular Economy (Reuse, Recycle, Remanufacturing)
- DX in PM (Material Informatics, Material Integration)

A complete list including more detailed categories can be found on
<https://www.worldpm2024.com/cfp.html>

Awards

WORLD PM2024 Best Presentation Award / Best Poster Award will be offered to the outstanding presenters. Detailed information will be announced on the website later.

Congress Proceedings

All papers of oral / poster Sessions will be published in the Congress Proceedings. Guidelines for the preparation of manuscripts will be notified to authors with their acceptance letters **by the end of February 2024**.

The proceedings will be published after the Congress. The inclusion of a paper, both oral and poster, in the final WORLD PM2024 program will be dependent upon meeting the below deadlines:

-Manuscript Submission Deadline: **30 June 2024**

-The presenting author completing the delegate registration and payment **by around July 2024**

All invited and contributed papers will be peer-reviewed by the Technical Committee.

For any inquiries, please contact:

WORLD PM2024 Secretariat

c/o JTB Communication Design, Inc.

E-mail: worldpm2024@jtbcom.co.jp

*For any further information, please visit us at <https://www.worldpm2024.com/> and subscribe to our mailing lists at <https://form.qooker.jp/Q/en/worldpm2024newsbsc/form/>



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JSPM Activity of 2022



Autumn Meeting



Meeting Party



Powder Metallurgy Sminar



Shuzo Sonoda

President of FUKUDA
METAL FOIL & POWDER
CO., LTD.



Yoko Inoue

Executive Director
Secretary General



JSPMIC2023 Website



Online Journal of the JSPM



Award Ceremony 2022



Ordinary General Meeting



c/o Research Institute for Production
Development, 15 Morimoto-cho, Shimogamo,
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E-mail: inoue@jspm.or.jp
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The 2nd periodic meeting on 2023 for discussion of APMA2023.



Kun Jin Lee

President of KPMA.
Korea Sintered Metal Co., Ltd.

I have been serving as
president of KPMA since
March 2017.

Also I am a president of
Korea Sintered Metal Co., Ltd.
and Samhan Co., Ltd. those
Companies are powder
metallurgy company that
represents Korea in the
powder metallurgy market.

I hope to continue all of us
growth and development
through close cooperation
and assistance with who serve
powder metallurgy.



Winfred OH

Secretary General
Korea Sintered Metal Co., Ltd.

My name is Winfred OH.

I am doing a general secretary
work at KPMA since July 2022.

I am administering sales
promotion company in behalf of
foreign famous machine builders
and material producer whose
products are involved with
powder metallurgy and chemical,
automotive, steel mill industries
that is requiring sintering furnace
and powder compacting press
and ferrous & non-ferrous
powder and chemicals in their
production lines from European
countries, Australia, USA, India
since 24 years in Korea.



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Korean Powder Metallurgy & Materials Institute
(KPMI) is a professional academic society consisted of
over 2,300 specialists in universities, research institutes
and companies on powder metallurgy technology
leading the key and future advanced industries.
KPMI contributes to the industrial revigoration, the
capability improvement and the global specialist
cultivation in PM industries, with the activities of
R&D, technical information exchange between
academics and industries, and international cooperative
network, since 1993.

2022 Activites

Korean Powder Metallurgy & Materials Institute Spring Conference
Period : March 31 ~ April 1, 2022
Venue : Gyeongju Hwabaek Convention Center, Gyeongju , Korea



Korean Powder Metallurgy & Materials Institute
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http://kpma.or.kr
http://isnm.org



Ji-Hun Yu

President

Korean Powder Metallurgy & Materials Institute
(KPMI) is a professional academic society consisted of
over 2,100 specialists in universities, research institutes
and companies on powder metallurgy technology
leading the key and future advanced industries.
In 2023, KPMI held International Conference and
Exhibition on Powder Metallurgy (APMA 2023)
at Gyeongju, Korea, and planning to have special
ceremony for 30th anniversary of KPMI.



Yeon Ho Kim

Manager

17th International Symposium on Novel and Nano Materials
(ISNNM-2022)

Incorporating the Korean Powder Metallurgy & Materials Institute Fall
Conference

Period : November 14 ~ 18, 2022

Venue : On site in Phoenix jeju, Korea and Online





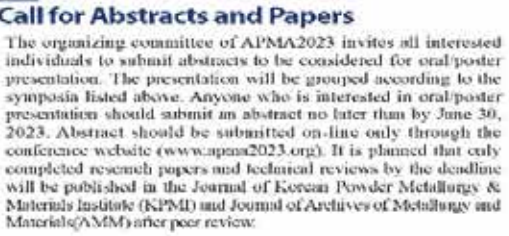
Powder Metallurgy Technician's School
Period : December 7~8, 2022
Venue : Korea Institute of Materials Science, Changwon, Korea

2023 Activites

Korean Powder Metallurgy & Materials Institute Spring Conference
Period : April 6~7, 2023
Venue : Changwon Exhibition Convention Center, Changwon, Korea




6th International conference and Exhibition on Powder Metallurgy in Asia
Period : November 27 ~ 30, 2023
Venue : Gyeongju Hwabaek Convention Center, Gyeongju , Korea



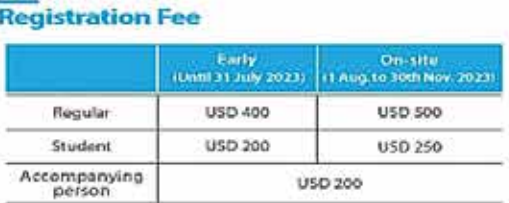
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Important Dates


- Abstract submission: June 30, 2023
- Notification of abstract acceptance: July 31, 2023
- Exhibition stall reservation: July 31, 2023
- Early registration: July 31, 2023
- Full paper due (non-mandatory): December 30, 2023




Registration Fee

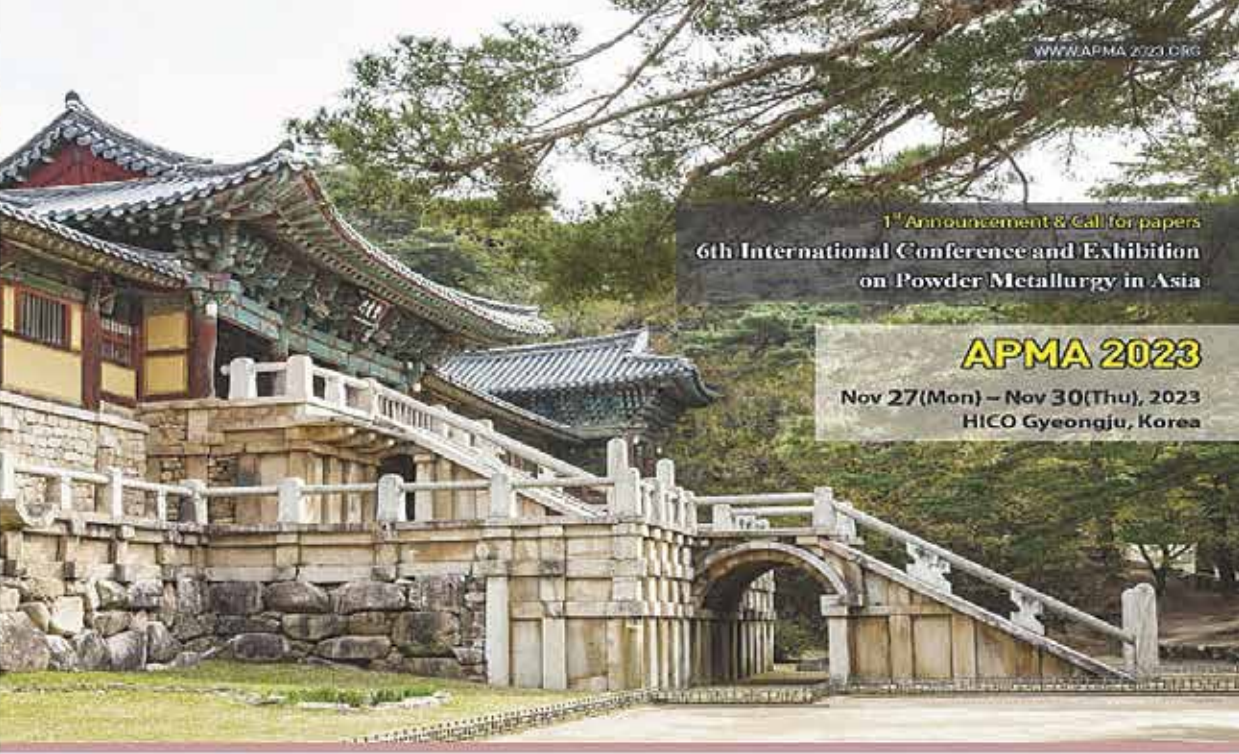
	Early (Until 31 July 2023)	On-site (1 Aug. to 30th Nov. 2023)
Regular	USD 400	USD 500
Student	USD 200	USD 250
Accompanying person	USD 200	

☞ For more information contact the conference secretariat.



APMA Secretariat
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1st Announcement & Call for papers
6th International Conference and Exhibition on Powder Metallurgy in Asia
APMA 2023
Nov 27(Mon) – Nov 30(Thu), 2023
HICO Gyeongju, Korea

Korean Powder Metallurgy & Materials Fall Conference
Period : November 30 ~ December 1, 2023
Venue : Gyeongju Hwabaek Convention Center, Gyeongju , Korea





Aniket Gore
President of PMAI



K.S. Samant
Director of PMAI



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PMAI Activities 2022 -23

International Conference on Powder Metallurgy 2022 – PM 22 Virtual mode on 18th- 20th April 2022

The Powder Metallurgy Association of India (PMAI) had organized a three-day International Conference on Powder Metallurgy 2022 (PMAI-PM22) in virtual mode on 18th – 20th April 2022. The conference was sponsored by DORST (Title Sponsor) and other esteemed Platinum sponsors like ARCI, DR. FRITSCH, Fluidtherm, Haili, Höganäs, IMP, Malvern Panalytical, Makin Metal Powders, Pometon, Porite, Rio Tinto, SACMI, Singhal Sintered, SLM and TATA Steel. In all three days put together, there were more than 300 plus delegates actively participated in this grand event.

The Chief Guest for the inauguration of PM22, Sunil Murlidharan, Höganäs India addressed on the corporate reflections and business strategy to cater the needs of Industry 4.0 through PM. The virtual inauguration was also witnessed by the Guest of Honour, Vikram Merchant, Country Head, RioTinto India. He highlighted the PM technology in global perspective.

The conference had an exciting line-up of speakers which included leaders from industry, researchers, and academia. It comprised of 6 plenary lectures, 3 memorial lectures, 29 invited talks and 118 contributory papers.



Powder Metallurgy Short Course-22 (PMSC22)

21-24 September 2022

In Virtual Mode: Platform used: Microsoft Teams

A four-day short-term course on powder metallurgy (PM) "Powder Metallurgy Short Course-22 (PMSC22)" took place from 21-24 September 2022 in the virtual mode. The program was organized by PMAI in collaboration with Department of Metallurgy & Materials Science College of Engineering Pune and National Institute of Advanced Manufacturing Technology, Ranchi Campus. Invited talks covered various aspects of powder metallurgical technology. The multiple invited talks were delivered by eminent speakers and covered various powder metallurgy and its application related topics.

Course on Tool Design Process for PM Parts

The Powder Metallurgy Association of India, conducted a three-day course on Tool Design Process for PM Products in offline mode at Dept. of Metallurgy and Materials Science, COEP Technological University (Unitary Public University of Govt. of Maharashtra) Pune during 8-10 November 2022. The course was conducted by Mr. Sanjay Rastogi.

The course presented in-depth overview of compaction process and design of tools for new and prospective entrants to the PM product design and existing PM components manufacturers.

Important topics that were covered

- Basics of Powder Metallurgy & Compaction
- Compaction – Interrelation between Product & Tool Design
- Elasticity of Tools & Product Quality
- The Adapter as Link between Tool and Press
- Tool Design Process – General Assembly
- Compaction – Fundamentals
- Tool Friction & M/Q Ratio
- Effect of Magnetism on Pressing Process
- Tool Design Process – Product to Tool

Course on Heat Treatment of PM Parts

PMAI conducted Two-day course on a crucial area of "Heat Treatment of PM parts" in offline mode at Dept. of Metallurgy and Materials Science, COEP Technological University (Unitary Public University of Govt. of Maharashtra) Pune during 9th and 10th December 2022.

The course presented a technology overview for new and prospective entrants to the PM and was conducted by Mr. NL Chandrachud. Mr. Chandrachud was ably supported by Prof. N.B. Dhokey of Metallurgy and Material Science Department of COEP, Pune with Mr. Sandeep Menavalikar consulting expert.

Important topics that were covered

- Introduction to Powder Metallurgy
- Why Heat Treatment? Improvement in Static and Dynamic Strength.
- Theory of Quenching – Quenchants for PM Parts - Oils and Polymers
- Steam Treatment
- Heat Treatment of Tool Steels;
- Furnace in relation to the Thermal Processing of Metals,
- Furnace Protective Atmospheres

PMAI acquired its own office in an independent premises at Unit 401, K- Square, Baner, Pune. Office was formally inaugurated on 22nd January 2023. Many members were present at the inaugural ceremony



International Conference on Powder Metallurgy and Particulate Materials +Exhibition 2023 – PM 23

13th - 15th March 2023 at Hotel The Lalit Mumbai, India.

The Powder Metallurgy Association of India (PMAI) had organized a three-day International Conference on Powder Metallurgy and Particulate Materials +Exhibition 2023 (PMAI-PM23) on 13th – 15th March 2023 at Hotel The Lalit, Mumbai India.

Conference had 3 Title Sponsors M/s DORST Technologies, M/s FLUIDTHERM, and M/s RIO TINTO. The other sponsors were ARCI, DR. FRITSCH, Fine Organics, Haili Machines, Höganäs, Innomet Powders, KRN alloys Pvt. Ltd., IMP, Makin Metal Powders, Pometon, Nikam Sintered, SACMI, Singhal Sintered, SLM Metals, Speciality Sintered Pvt. Ltd., PVA TePla AG, Osterwalder, TATA Steel Xitiz Technologies LLP.

At the inaugural lamp lighting ceremony, Ms. Jess Blackburn – Rio Tinto (Chief Guest), Mr. N Gopinath – Fluidtherm Furnaces (Past President-PMAI), Mr. Sunil Muralidharan-Hoganas India, Prof N B Dhokey (Convenor), Mr. Aniket Gore (President of the Powder Metallurgy Association of India) did the honours.

The conference had an exciting line-up of speakers and 24 leading global industry Exhibitors. Speakers included leaders from industry, researchers, and academia. It comprised of 3 plenary lectures, 3 memorial lectures, 45 invited talks and 120 contributory presentations.



Inauguration of International Conference Powder Metallurgy & Particulate Materials + Exhibition (PM23) on 13th March 2023 at Hotel The Lalit Mumbai, India.



PMAI PLANNED EVENTS 2023-24

New Pmai Training Program: Industrial Plant Safety!

Powder Metallurgy Association of India are pleased to introduce a **One day Online Training Program** elaborating the best Plant Safety Practises for the PM Industry on 12th July 2023.

Training Program Content:

1. Industrial Safety
 - a. Basic Safety
 - b. Risk Assessment (HIRA)
 - c. Near miss and Accident Preventions
 - d. Safety Committee and Safety Co-Ordinator
 - e. Best Practices on Safety
2. Fire Safety
 - a. Basic fire
 - b. Fire Triangle
 - c. How to use Fire Extinguisher
 - d. Fire Hydrant & System
3. Statutory Requirement pertaining to Occupational Safety and Health
 - a. The Factories Act, 1948 & Maharashtra Factory Rules 1963
 - b. Environment The water, Air and the Hazardous & Other Wastes
 - c. Maharashtra Fire Prevention and Life Safety Measures Act
4. Behavior Based Safety (BBS) Management & coaching
 - a. BBS Principles
 - b. ABC Technique
 - c. BBS Process Flow
 - d. Analyzing Exercise
5. Open Discussions.

PMSC 23 in third quarter 2023

Course on Tool Design Process in fourth quarter 2023

Course on Heat Treatment of PM Parts in fourth quarter 2023

PMAI INTERNATIONAL CONFERENCE



INTERNATIONAL CONFERENCE ON POWDER METALLURGY AND PARTICULATE MATERIALS WITH SHOW CASE EXHIBITION
49TH ANNUAL TECHNICAL MEETING OF PMAI

Date : 25th February 2024 to 28th February 2024

Venue : HYATT REGENCY, PUNE HOTEL & RESIDENCES, Weikfield IT Park, Nagar Road, Pune, India, 411014

Details at www.pmai.in



2022 Activites 15 May 2023

Agenda

- Update Situation
- Activities 2022
- Planned Activities 2023

Update Situation

- ThaiPMA started meeting and activities like normal.
- The main purpose is still the same
 1. Expand PM Knowledge to all members.
 2. Collaborate with the academic and government to prepare people to the PM industry.

Summary of the Activities in 2022

- 1 x Public PM School - done
- 2 x In-house PM School - finished at TFS. SEST in Dec.
- 1 x End-user Seminar - PM for Green technology - 2nd Dec.
- ThaiPMA Award at 13th TMETC 22 - 2nd Dec.
- ThaiPMA Paper Presenting Session at 13th TMETC22 - 2nd Dec.
- Collaborate with the universities for PM class meeting.
- 2 x ThaiPMA meeting in 2022

Photos of the activities



Public PM school training
At MTEC
2-3 Nov 2022



PM school training
At Sumitomo Electric Sintered Component (T) Co. Ltd.
15 Dec 2022



Pramote Eiangkhunchorn
President



Boon Teeraprawatekul
Secretary General



13th Thailand Metallurgy Conference
At Khao Yai



- Annual meeting of association
- Arrange and sponsor the conference session about PM
- Lecture about additive manufacturing from overseas expert

Planned Activities in 2023

- 2 x Public PM Schools
- 1 x Metallography School
- 1 x End-user Seminar
- ThaiPMA Award at 14th TMETC 23
- ThaiPMA Session at 14th TMETC 23
- Start the project for preparing people to PM industry



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Chun-Chung(Kevin) Shaw President

I have been serving as the President of TPMA since October 2021. Previously, I served as the vice President of TPMA from 2018 to 2021. In addition, I am the President of Super Electronics CO.,LTD.. This company is specializing in the production and development of magnetic materials which is one of the most representative companies in the magnets market in Taiwan.

Super Electronics CO.,LTD. was founded in 1971. The head quarter is located in Taipei City. There are also several manufacturing sites and business bases located in Taiwan, China and Malaysia. The Super Electronics CO.,LTD. mainly consists of two systems which are Superrite Electronics CO.,LTD., and Supermax CO.,LTD. Superrite Electronics CO.,LTD. mainly focuses on the production of ferrite magnets and SrTiO₃ variable resistor for DC micro motor. The target market of these products is the traditional industry. However, Supermax CO.,LTD. specializes in processing Neodymium magnet. Both of Superrite Electronics CO.,LTD. and Supermax CO.,LTD. specialize in the development and manufacture of magnet-related products. The target market of the group is also transferred smoothly from motor and electrical machinery factories that have a long life cycle to information and electronics industries that have a short life cycle.



Ching-Shuan Liu Secretary General

Dr. Ching-Shuan Liu is a Director in the President office of Super Electronics CO., LTD. He also serves as the general secretary of Taiwan Powder Metallurgy Association (TPMA). Dr. Liu earned his PhD degree in Materials Science and Engineering in National Tsing Hua University in 1996. Dr. Liu previously worked as a researcher at Industrial Materials Labs of Industrial Technology Research Institute (ITRI) from 1988 to 1997 before joining Super Electronics CO., LTD.

His research fields are both magnetic materials and fine ceramics. In these two fields, he mainly specializes in three topics:

- (1) Soft ferrites (magnetic)
- (2) Hard ferrites (magnetic)
- (3) SrTiO₃ variable Resistor



Events of Taiwan Powder Metallurgy Association (TPMA) in 2022

The 41th TPMA annual general convention was held at Luodong Town Yilan County on 26th-27th August 2022. On this beautiful Lanyang Plain, we were also hosting the long-awaited 40th anniversary celebration of the association for our members. In addition to presenting the customary awards for outstanding employees, best papers, innovation, and scholarships in the field of powder and powder metallurgy, we also conferred the highest honors of the association, the Outstanding Contribution Award and Service Award, to three members in recognition of their long-standing and outstanding contributions and service to the association.

The recipient of the Outstanding Contribution Award, professor W. C. Chang delivered a keynote speech titled "Forty Years of Honing a sword-Technological progress in Permanent Magnets and My Research Career." Following that, professor K. S. Hwang presented the second keynote speech titled "A Review of Taiwan's MIM Industry and Materials Development." Although the two keynote speeches represent different professional fields, they both share the essence of the four-decade research careers of the two professors.

Two speeches commended the TPMA's dedication to the research of powder and powder metallurgy technology of Taiwan over the past 40 years. After the general meeting, 18 insightful papers from various fields were presented at the general convention.



TPMA President Mr. Kevin Shaw presented the Outstanding Contribution award.



TPMA President Mr. Kevin Shaw presented the Distinguished Service award.



TPMA President Mr. Kevin Shaw presented the Distinguished Service award.



Dr. Wang presented the innovative award.



Dr. Wang presented the excellent staff award



Dr. Lin presented best paper award



TPMA Vice President professor J. K. Chen presented Association scholarship



Opening speech presented by TPMA President Mr. Kevin Shaw in the 2022 TPMA annual general convention



Speech presented by APMA President Mr. Chiu-Lung Chu in the 2022 TPMA annual general convention



Review words presented by professor W. C. Chang in the 2022 TPMA annual general convention



A photo of general convention and a corner of the event concert of the seminar



Keynote speech was presented by professor K. S. Hwang.



A group photo in the 2022 TPMA annual general convention



A photo of factory tour arranged by TPMA in the 2022 annual general convention



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PM Production in Asia

PM Production (Source JPMA, PMAI, KPMI, TPMA and CMPMA)

		(Metric Tons)			
AREA		2020	2021	2022	22/21(%)
Japan	Iron-base	71,467	81,137	72,363	89.2
	Copper-base	2,126	2,453	2,068	84.3
	Total	73,593	83,590	74,431	89.0
China	Iron-base	164,619	188,236	166,923	87.1
	Copper-base	11,268	13,539	12,580	92.9
	Total	175,887	201,775	176,503	87.5
Korea	*Iron-base	58,681	63,538	64,820	102.0
	Copper-base	1,118	872	566	64.9
	Total	59,799	64,410	65,386	101.5
Taiwan	Iron-base	30,700	31,000	26,000	83.9
	Copper-base	1,980	1,800	1,000	55.6
	Total	32,680	32,800	27,000	82.3
India	Iron-base	32,000	36,000	45,000	125.0
	Copper-base	8,500	9,800	12,000	122.4
	Total	40,500	45,800	57,000	124.5
Malaysia	Iron-base	3,063	3,354	3,342	99.6
	Copper-base	111	132	151	114.4
	Total	3,174	3,486	3,493	100.2
Singapore	Iron-base	1,105	1,337	1,077	80.6
	Copper-base	313	370	214	57.8
	Total	1,418	1,707	1,291	75.6
Thailand	Iron-base	13,514	16,036	14,208	88.6
	Copper-base	55	60	41	68.3
	Total	13,569	16,096	14,249	88.5
Indonesia	Iron-base	4,543	5,433	5,825	107.2
	Copper-base	62	0	0	—
	Total	4,605	5,433	5,825	107.2
Total	Iron-base	379,692	425,433	396,558	93.2
	Copper-base	25,533	29,664	28,620	96.5
	Total	405,225	455,097	425,178	93.4

*Included "Others"

• World PM2024 Yokohama

Japan

- (1) Organizer : JPMA (Japan Powder Metallurgy Industry Association) , JSPM (Japan Society of Powder and Powder Metallurgy)
- (2) Date : October 13th (Sun) to 17th (Thursday), 2024
- (3) Venue: Pacific Yokohama

