



Important Notes

The Manuscript Submission system is open since July 1. To submit a manuscript, please refer to the guide on the conference website. Early registration with reduced registration fee will be open from July 15 to September 30. Regular registration fee will apply after September 30. Details of the ICFRM-16 program provided here are tentative and subject to change. The latest up-to-date information on the meeting will be posted on the conference website at - <http://icfrm16.ustb.edu.cn>

Registration for ICFRM16 is now open

[Register now](http://icfrm16.ustb.edu.cn)

Final Announcement

16th International Conference on Fusion

Reactor Materials

October 20-26, 2013

Capital Hotel, Beijing, China

Website: <http://icfrm16.ustb.edu.cn>

E-mail: icfrm16@gmail.com

Supported by

The Ministry of Science & Technology, P.R. China

The Ministry of Education of the People's Republic of China

ITER-National Magnetic Confinement Fusion Program (China)

Hosted by

University of Science and Technology Beijing (USTB)

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Scope

The International Conference on Fusion Reactor Materials is the major international forum for information exchange about materials to be used in future fusion power systems. ICFRM-16 is the next meeting in this conference series. It will again assemble the world community to present their results on research, development, and deployment of materials for ITER, other nearer term experimental plasma devices and longer term fusion power sources. The scope of the conference ranges from fundamental materials science to predicting and optimizing in-service materials performance, and will be delivered in a mix of invited and contributed oral and poster presentations.

Topics

All subjects on materials and materials technology for current fusion devices and future fusion reactors are appropriate for this conference. These topics will include, but are not limited to:

1. **Advanced materials development including fabrication and joining**

- Ferritic/martensitic steels
- Advanced steels, ODS steels
- Ceramics, ceramic composites and other low-Z materials
- Tungsten, refractory alloys and other high-Z materials
- Vanadium and its alloys
- Other structural alloys

2. **Fusion specific applications of materials**

- Plasma-facing materials
- High heat flux materials
- Breeding and multiplying materials

- Insulating materials
- Plasma diagnostic system materials
- Magnet materials

3. **Materials technologies and testing in IFMIF, ITER and beyond**

- Test blanket module material technologies and issues
- ITER material technologies and issues
- IFMIF and other intense fusion neutron sources

4. **Materials-design interface issues**

- Codes, standards, and materials databases
- Safety criteria and requirements

5. **Fundamentals of radiation effects and advanced characterization**

- Defect production and properties
- Microstructural evolution
- Mechanical property changes
- Fundamental helium, hydrogen, and tritium effects
- Advanced characterization and specimen test technology

6. **Multi-scale modelling**

- Multi-scale modelling for design
- Modelling to predict the performance of fusion materials and systems
- New developments of multi-scale approaches for designing radiation resistant materials

7. **Environmental effects**

- Tritium retention and transport
- Oxidation / corrosion
- Chemical compatibility
- Barrier coatings

8. **Programs and strategies**

- Cross-cutting approaches

- Cross-cutting materials issues for fusion and fission nuclear power
- The Broader Approach and other international collaborations
- Education and training

Applications of **computational methods and computation materials science** are encouraged in all of these categories.

Publication

All Papers will be peer reviewed to a high standard. Only papers that have been presented at ICFRM-16 will be considered for publication. The Proceedings of ICFRM-16 will be published in two parts, in two journals: Fusion Science and Technology and Journal of Nuclear Materials

Language: The language of the Conference and for the Proceedings is English. All papers must be written in English and the authors are responsible for correct English usage.

Your paper should strictly follow the journal instructions as directed on the conference website. For more details please see the website "[Manuscript Submission](#)".

Registration

The registration for the conference will be available starting **July 15, 2013** and ending **October 18, 2013**, and on-site registration will be offered during the conference. Authors and conference attendees are asked to register through the website. Students are requested to register under the authority of his/her faculty advisor.

Early registration with reduced registration fee is encouraged, and attendees are encouraged to take advantage of the limited block of hotel rooms at the very favorable conference rate. Note that a reduced fee will be available until September 30. A deferred payment registration option is

also available, but payment must be received by September 30 to qualify for the lower fee.

The regular registration fee (see table below) includes a copy of the conference proceedings, welcoming reception, refreshments and banquet. The student fee excludes the proceedings and banquet. The accompanying person fee includes the banquet. Detailed registration information is available on the conference website.

To register online please click: [Registration](#)

Type of Registration	Before September 30 (Early-Registration)	After September 30
Regular	5,000 RMB	5,500 RMB
Student	2,500 RMB	3,000 RMB
Accompany person	750 RMB	750 RMB

Hotel Accommodation

All conference activities will be held in the Capital Hotel, located in the scenic downtown area of Beijing, that includes historical sites, Tiananmen Square, Forbidden City, Temple of Heaven, etc. All are within walking distance, and near the well-known Wangfujing shopping area. The city enjoys a moderate continental climate, especially during the colorful and charming Golden Autumn. Daytime high temperatures of 18°C are anticipated. However, evenings are considerably cooler and attendees are encouraged to bring a warm jacket.

ICFRM16 organizers have booked a certain amount of off-priced rooms in Capital Hotel, People are encouraged book rooms in the registration process, there are two types of rooms (Standard Room 750RMB/day with free breakfast, and Deluxe Room 850RMB/day with free breakfast). All

rooms have free wireless internet access available for all participants, and the wired network will charge 20 Yuan per hour and 100 Yuan at most. For more details of Capital Hotel please see: <http://www.capitalhotel.com.cn/>.

Scientific Program

The scientific program consists of 12 plenary lectures, approximately 81 invited and contributed oral presentations and 450 posters, as well as a keynote session. Keynote topics include Fusion in China and Status of ITER that will be presented by distinguished academician Yuan-Xi Wan and one of leaders of ITER organization respectively. Plenary topics include: ferritic/martensitic steels; fusion materials modeling; ITER materials/component fabrication and performance demonstration; ODS steels; ITER TBM material/component fabrication and testing; ceramic insulators and plasma diagnostics; high heat flux/plasma-facing components; SiC/SiC composites; near-term DEMO fusion power plant; Materials options; Indian Activities on Fusion Reactor Materials; IFMIF/EVEDA under the Broader Approach framework.

The distinguished international group of plenary speakers includes Prof. George Robert Odette (USA), Dr. Steven J. Zinkle(USA), Dr. Farhad Tavassoli (Europe), Prof. Tatsuo Shikama (Japan), Academician Chang-Chun GE(China), Dr. Derek Stork (Europe), Prof. Masayoshi Sugimoto(Japan), Prof. Srikumar Banerjee(India), Dr. Vladimir R. Barabash(IO), Prof. Kai-Ming Feng(China), Dr. Maria J. Caturla (Europe), and Dr. Yutai Katoh(USA).

Social Activities

A special program will be available to help participants and their guests enjoy the numerous famous historical sites which possess great aesthetic and cultural value. These include a variety of UNESCO World Cultural

Heritage sites, such as Forbidden City, Great Wall, Summer Palace, Temple of Heaven, Ming Tombs, Yonghe Palace etc., as well as a myriad of temples, shrines and other famous sites.

If you would like to make a tourist plan after this conference, the listed below provide some candidate tour routes.

Local Tours (LT):

LT1: Ming Tombs-The Great Wall,

Time: 08:30-17:00; Price: RMB 450

LT2: Forbidden City-Tian'anmen Square-Temple of Heaven,

Time: 08:30-17:00; Price: RMB 450

LT3: Hutong Tour-Beihai Park-Jingshan Park,

Time: 08:30-17:00; Price: RMB 350

LT4: Lama Temple-Confucian Temple in Beijing-Summer Palace,

Time: 08:30-17:00; Price: RMB 400

Post-Congress Tours (PT):

PT1: Beijing-Xi'an-Beijing (3 days), Price: Single Occupancy (RMB5, 600/person), Double Occupancy (RMB5, 100/person)

PT2: Beijing-Xi'an-Guilin-Shanghai (6 days), Price: Single Occupancy (RMB 11,000/person), Double Occupancy (RMB 9,600/person)

Please note the LT tours fee includes transportation, lunch, admission fees and an English-speaking tour guide; and the PT tour fee includes inter-city transportation, regular meals, hotel accommodation and admission fees. China International Conference Center for Science and Technology (CICCST) will reserve the right to raise the prices or cancel any of the local tours, if attendees are fewer than 10 persons. The program is subject to be changed according to the local situation. For more details please see our website (<http://icfrm16.ustb.edu.cn>). You can contact Mr. Wang Yu (Email: wangyu60742@gmail.com, Mobile: +86 18601019920) if you have any

problems.

Airports and Access

The Capital hotel is 30 km from Beijing International Airport, and it can be reached by train (Airport train to Dongzhimen station, transfer to No.2 subway, Chongwenmen station), bus (Airport Bus to Beijing railway station, transfer to No.9 or No.729 bus, Taijichang station), taxi or rental car. International participants are encouraged, however, to arrive at the Capital hotel by taxi. The travel time from the airport to the hotel is approximately 45 minutes and 95 RMB.

Domestic participants are encouraged to take the subway to the hotel. The subway stations include Qianmen, Chongwenmen and Wangfujing are all in the range of 1000m with walking time of ten minutes.

A map and directions to the Capital hotel are provided on the hotel website (<http://www.capitalhotel.com.cn>). Additional information will be provided on the ICFRM-16 website.

Key Dates

- Abstract submission opens: January 3, 2013 /Thursday
- Abstracts submission closes: February 28, 2013/Friday
- Notification of acceptance: May 31, 2013/Friday
- Early on-line registration opens: July 15, 2013/Monday
- Third Announcement: July 15, 2013/Monday
- Early registration closes; September 30, 2013/Monday
- Final manuscripts due: October 25, 2013/Friday
- Conference Dates: October 20 to 26, 2013
- Satellite meetings can be scheduled Friday afternoon and Saturday after the conference.

Information on the Conference and Assistance

Up to date information on ICFRM-16 will be posted on the conference website (<http://icfrm16.ustb.edu.cn>) along with many other useful internet links and contact information.

The conference organizers will continue to provide assistance in abstract related issues and encourage participants to contact the conference secretariat (icfrm16@gmail.com) if problems are encountered.

Visa Support

Passports, valid for at least six months from the entry into China, and entry visas are required to visit China. Participants are advised to consult the nearest Chinese diplomatic mission for details. A single entry visa is valid for three months, and can be extended for an additional month at the Foreigners Section of the Local Public Security Bureau if necessary. Once in China, the participants are advised to carry their passports with them at all times because the passports may be needed to check into hotels, book airline tickets, and change money. For invitation letter, participants should first complete the On-line Registration with the appropriate registration fee. The secretariat will then send a formal invitation form via fax or airmail (if needed) with which the participants can apply for a visa at the Chinese diplomatic mission indicated in the invitation. This application should be made preferably at least one month before departure for China. Alternatively, participants may ask their travel agents to arrange their travel to China and obtain a tourist visa irrespective of whether or not they have registered with the Conference Secretariat.

Please contact Mr. Yu Wang (wangyu60742@gmail.com) regarding visa and invitation letter issues.

Organization

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Tentative Conference Program

Oct. 20 (Sun)	Oct. 21 (Mon)	Oct. 22 (Tue)	Oct.23 (Wed)		Oct.24 (Thu)		Oct.25 (Fri)		
8:00	Registration		Registration		Registration		Registration		
8:30-10:30	8:30 Opening Keynote session 9:00K-1: Fusion in China (Wan) 9:40K-2: Status of ITER (Motojima)	Plenary (2) 8:30 P2-1 ODS steels (Odette) 9:00 P2-2 ITER TBM (Feng) 9:30 P2-3 Ceramics (Shikama)	O-3A H/He&Modelling(1) 8:30 I1 (Dai) 9:00 I2 (Gao) 9:30 O1 (Stoller) 9:50 O2 (Lefaix-Jeuland) 10:10 O3 (He)	O-3B Material/plasma 8:30 I1 (Brezinsek) 9:00 I2 (Luo) 9:30 O1 (De Temmerman) 9:50 O2 (Hirooka) 10:10 O3 (Putrik)	O-6A H/He&Modelling(2) 8:30 I1 (Becquart) 9:00 I2 (Tokunaga) 9:30 O1 (Wang) 9:50 O2 (Shaimerdenov) 10:10 O3 (Zhou)	O-6B Tritium Technol. 8:30 I1 (Lai) 9:00 I2 (Shimada) 9:30 O1 (Okuno) 9:50 O2 (Konys) 10:10 O3 (Okita)	O-8A H/He&Modelling(3) 8:30 I1 (Yu) 9:00 I2 (Spitsyn) 9:30 O1 (Edwards) 9:50 O2 (Nandipati) 10:10 O3 (Xia)	O-8B DEMO Session 8:30 I1 (TBD) 9:00 I2 (Nishitani) 9:30 I3 (Gilbert) 10:00 I4 (Porton)	
10:30-10:40	Coffee break								
10:40-12:40	Plenary (1) 10:40 P1-1 RAFM (Tavassoli) 11:10P1-2 Modeling (Caturia) 11:40P1-3 ITER materials (Barabash)	Plenary (3) 10:40 P3-1 HHF/PFC (Ge) 11:10 P3-2 SiC/SiC (Katoh) 11:40 P3-3 EU DEMO materials (Stork)	O-4A W & high-Z 10:40 I1 (Rieth) 11:10 I2 (Snead) 11:40 O1 (Rivera) 12:00 O2 (Kurtz) 12:20 O3 (Antusch)	O-4B Defects property 10:40 I1 (Woo) 11:10 I2 (Aliaga) 11:40 O1 (Setyawan) 12:00 O2 (Prokhotseva) 12:20 O3 (Meinander)	O-7A ITER/TBM/IFMIF 10:40 I1 (Escourbiac) 11:10 I2 (Tanigawa) 11:40 O1 (Wakai) 12:00 O2 (Sabau) 12:20 O3 (Liu)	O-7B V & functional 10:40 I1 (Vladimirov) 11:10 I2 (Muroga) 11:40 O1 (Leonard) 12:00 O2 (YAN) 12:20 O3 (Tyumentsev)	Plenary (4) 10:40 P4-1 Near-term challenges (Zinkle) 11:10 P4-2 Indian FRM activities (Banerjee) 11:40 P4-3 IFMIF/EVEDA (Sugimoto)		
	International Advisory Committee Meeting				Excursion (Some Courses start earlier)				
14:00-16:10	O-1A RAFM steels 14:00 I1 (Yamamoto) 14:30 I2 (Luzginova) 15:00 I3 (Huang) 15:30 O1 (Tan) 15:50 O2 (Sam)	O-1B Microstructure (1) 14:00 I1 (Abe) 14:30 I2 (Miller) 15:00 O1 (Yao) 15:20 O2 (Parish) 15:40 O3 (Kuksenko) 16:00 O4 (Was)	O-2A ODS steels 14:00 I1 (He) 14:30 I2 (Boutard) 15:00 O1 (Hoelzer) 15:20 O2 (Byun) 15:40 O3 (Kimura)	O-2B Microstructure (2) 14:00 I1 (Chen) 14:30 I2 (Liu) 15:00 O1 (Klimenkov) 15:20 O2 (Terentyev) 15:40 O3 (Yang)	O-5A Ceramics & low-Z 14:00 I1 (Henager) 14:30 I2 (Ferraris) 15:00 O1 (Perez-Bergquist) 15:20 O2 (Nozawa) 15:40 O3 (Ozawa)	O-5B Mech. Property 14:00 I1 (Kasada) 14:30 I2 (Koyanagi) 15:00 O1 (Maloy) 15:20 O2 (Chun) 15:40 O3 (Gonzalez de Vicente) 16:00 O4 (Shiro)			
16:00-19:00 Registr-ation	16:00-16:30	Coffee break				Coffee break		Coffee break	
17:00-20:00 Get together	16:00-18:50	Poster (1) ● 150 pieces! ● Reflecting topics already reported in the Plenary & Oral sessions!	Poster (2) ● 150 pieces! ● Reflecting topics already reported in the Plenary & Oral sessions!	Poster (3) ● 150 pieces! ● All topics not yet presented			Satellite Workshops		
	19:00					Satellite Workshops		Banquet	

