

The 10th DAE - BRNS Biennial Symposium on Emerging Trends in Separation Science and Technology **SESTEC - 2022**



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Ananthasivan, K., IGCAR, Kalpakkam

NOVEMBER 22-26, 2022

Institute of Chemical Technology (ICT), Mumbai, India

The Board of Research in Nuclear Sciences (BRNS) sponsored Tenth Biennial Symposium on "Emerging Trends in Separation Science and Technology (SESTEC-2022)" will be organized by Bhabha Atomic Research Centre (BARC) in association with the Association of Separation Scientists and Technologists (ASSET) during November 22-26, 2022 at Institute of Chemical Technology, Mumbai, India. The objective of SESTEC-2022 is to provide a forum to scientists and engineers to discuss the recent advances in the area of separation science and technology falling under the following scope.

DEADLINES

Abstract Submission September 15, 2022

Intimation of Abstract Acceptance September 30, 2022

Request for Accommodation : October 15, 2022

Payment of Registration fee : October 15, 2022

A. Synthesis of solvents, resins and membranes

- B. Separations in nuclear fuel cycle
- C. Green separations

Scope

- D. Chromatography, electrochemical and pyrochemical separations
- E. Separation in Industries
- F. Isotope separations
- G. Membrane science and technology
- H. Radiochemical separations.
- I. Speciation studies

Abstract Submission

Abstracts of the contributed papers should be submitted before September 15, 2022. The length of the abstract should be limited to one page including figures, tables and references. Abstract submission should be done through the link available on ASSET website: https://www.asset.org.in using the specified template. Abstracts will be peer reviewed prior to inclusion in the symposium proceedings.

Limited number of papers will be selected for publication in "Separation Science and Technology". The authors will be intimated in advance about the selection of their contributions for Journal publication.

The scientific programme of the symposium will include Invited talks by eminent Indian and overseas scientists / engineers. Contributed papers will be presented in Oral and Poster sessions.

REGISTRATION FFF

Delegates from academic / INR 5000/-Research Institutes Delegates from Industries INR 10.000/-Delegates from Overseas USD 600/-INR 2000/-

The symposium will also include One day theme meeting on "Separation Science in Industries"

> A Half-day Session in the honour of

Shri H.N. Sethna, Former Chairman, AEC

Patrons Vyas, K.N., DAE, Mumbai Joshi, J.B., Mumbai, India Mashelkar, R.A., Pune, India

Advisory Committee

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Dr. N. Sivaraman

Chairman, Technical Committee, SESTEC-2022 Director, MC&MFCG, IGCAR, Kalpakkam, India Email: sivaram@igcar.gov.in Tel: +91-44-541124166

Research Scholars / Students INR 2000/-

Accompanying person (India)

Accompanying person (Overseas) USD300/-

Dr. S. Kannan Dr. P. K. Mohapatra

Co-Chairman, SESTEC-2022 Chairman, SESTEC-2022 Director, RC & I G Head. Radiochemistry Division BARC, Mumbai, India BARC, Mumbai, India Email: skannan@barc.gov.in Email: mpatra@barc.gov.in Tel: +91-22-25593933 Tel: +91-22-25594576

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Co-Convener SESTEC 2022 Head, Chemical Engineering Department ICT, Mumbai, India Email: vk.rathod@ictmumbai.edu.in Tel: +91-22-33612020

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DAE - BRNS sponsored Tenth Biennial Symposium on

Emerging Trends in Separation Science and Technology (SESTEC-2022)

at

Institute of Chemical Technology (ICT), Mumbai, India

November 22-26, 2022

Organized by Bhabha Atomic Research Centre

In association with
Association of Separation Scientists and Technologists
(ASSET)



SESTEC-2022

The DAE-BRNS sponsored tenth biennial symposium on "Emerging Trends in Separation Science and Technology (SESTEC-2022)" is being organized by Bhabha Atomic Research Centre, Mumbai in association with the Association of Separation Scientists and Technologists (ASSET). This symposium is sponsored by the Board of Research in Nuclear Sciences (BRNS), Department of Atomic Energy (DAE). It will be held during November 22-26, 2022 at Institute of Chemical Technology (ICT), Mumbai, India. The objective of SESTEC-2022 is to provide a forum to scientists and engineers to discuss the recent advances in the area of separation science and technology relevant to the nuclear fuel cycle activities, such as separation of actinides, lanthanides, and fission products and their speciation. The symposium also covers recent developments in membrane technology, separation techniques and waste water remediation. The symposium will be extremely useful, especially to the young researchers, as it will be attended by eminent scientists and engineers from National Laboratories, Universities and Research Institutes from India and abroad and will provide a platform for effective interaction among those engaged in research in the area of separation science and technology.

SCOPE

- A. Synthesis of solvents, resins and membranes
- **B.** Separations in nuclear fuel cycle
- C. Green separations
- D. Chromatography, electrochemical and pyrochemical separations

- **E.** Separation in Industries
- **F.** Isotope separations
- G. Membrane science and technology
- H. Radiochemical separations,
- **I.** Speciation studies

The five day symposium will bring together a panel of highly accomplished experts in the field of separation science and technology. The scientific programme of the symposium will include Invited Talks by eminent scientists from India and Overseas. The invited talks will encompass basic studies and applications and will address topics of novel issues related to separation science and technology. Contributed papers will be presented in both Oral and Poster sessions.

It is proposed to have oral presentation by the researchers based on the novelty of their work as recommended by the reviewers. The oral presentations will be reviewed by a panel of judges for the best presentation awards.

The symposium will also include a theme meeting on "Separation Science in Industries"

a Session in the honour of Shri H.N. Sethna, Former Chairman, AEC.

Abstract of the contributed papers will be peer reviewed prior to their inclusion in the symposium proceedings. Limited numbers of papers will be selected for publication in the reputed journal, "Separation Science and Technology". The authors will be intimated in advance about the selection of their contributions for journal publication.

THE VENUE

The symposium will be held at Institute of Chemical Technology (ICT), Mumbai, India.

ABOUT MUMBAI

Mumbai, the financial center of India situated on the west coast. On the harbor waterfront stands the iconic Gateway of India, built in 1924. Offshore, nearby Elephanta Island holds ancient cave temples dedicated to the Hindu god Shiva. Mumbai has a tropical climate, with pleasant temperature ranging from 20 to 30°C during the months of October-December.

LOCATION

ICT is located on a 16 acres (65,000 m²) campus at 19.024°N 72.859°E Coordinates: 19.024°N 72.859°E. The institute is located in Matunga (a locality in the heart of Mumbai City). The academic building faces Nathalal Parekh Marg. VJTI (Veermata Jijabai Technological Institute) (Backside), Khalsa College, Don Bosco Church are well-known landmarks adjacent to the ICT.

How to reach the VENUE

(i) From Chhatrapati Shivaji Internation Airport, Santacruz Rent a pre-paid taxi for Maheshwari Udyan/King's Circle, Don Bosco and ICT. It takes about 30-40 minutes.

(ii) By local train and bus

Most of the long distance trains on the Central and Western Railways halt at the *Dadar Railway Station*. From Dadar station, a taxi can be hired for Maheshwari Udyan/King's Circle, Don Bosco and ICT. Alternately BEST Bus No.64 (for central railway) and Bus No. 169 (for western railway) can be used to reach ICT. In addition all buses operated by the Maharashtra State Road Transport Corporation and private carriers stop at *Dadar bus station* (popularly called Dadar TT).

(iii) From Chhatrapati Shivaji Terminus (CST)

Board a Harbour train to Wadala station or central line train to Matunga station. From both the stations ICT is at a (12-15 min) walking distance.

Tourist Attractions





Marine Drive



Chhatrapati Shivaji Terminus



Essel World



Sanjay Gandhi National Park



Bandstand Promenade

BRNS

The Department of Atomic Energy (DAE) through its nodal funding agency—The Board of Research in Nuclear sciences (BRNS) supports extramural research and development activities in nuclear and allied sciences, engineering and technology. The major activities of BRNS are: identifying and funding R&D programmes and projects, award fellowship to pursue doctoral programmes and research grants to young scientists. It also organizes symposia on topic of relevance and interest to DAE as well as other frontier areas of science and technology, extend financial support to symposia and conferences organized by professional bodies and other agencies, establishment of chairs in universities and other institutions of higher learning, create infrastructure facilities for advance research, identify/create and support centers of excellence. For more information, please visit the website (www.brns.res.in).

TRAVEL ARRANGEMENTS

It is expected that, the participants will make their own travel arrangements. However, transports will be provided to the delegates at pre-specified time from Anushaktinagar to the venue during the conference.

FINANCIAL ASSISTANCE

TA/DA may be made available to a few deserving student participants, where the parent institution is unable to arrange. Request for financial assistance must reach Secretary, Symposium Organizing Committee, on or before October 20, 2022. The financial assistance request forms can be downloaded from the website (www.asset.org.in/sestec-2022). Filled forms should be sent via email to the symposium secretary at sestec-2022@gmail.com.

AUTHORS PLEASE NOTE

- 1. Papers based on original unpublished work will only be accepted.
- Contributory papers are invited on topics listed overleaf in the form
 of one page manuscript. The entire text should be typed using the MS
 Word template. The template can be downloaded from
 www.asset.org.in/sestec-2022. Manuscripts not complying with the
 format will not be sent for review.
- 3. Manuscript should be categorized (A to I) as per the titles given under SCOPE of the symposium.

- 4. Abstract submission should be done online via website: www.asset.org.in/sestec-2022. The abstract submission deadline is 15th September, 2022.
- 5. E-mail ID of the corresponding author should be given in the manuscript and the name of the presenting author should be underlined. All the future communications in respect of manuscript will only be made to the corresponding author.
- 6. Exclusively for authors from DAE: Please note that the contributed papers should be accompanied with the note of **approval from the competent authority**.

7. DEADLINES

Submission of Contributory Paper : September 15, 2022
Intimation of Acceptance of Paper : September 30, 2022
Request for accommodation : October 15, 2022
Submission of Registration Fees : October 15, 2022

REGISTRATION FEE

Research Scholars / Students	:	INR 2000/-
Delegates from academic / Research Institutes	:	INR 5000/-
Delegates from Industries	:	INR 10,000/-
Delegates from Overseas	:	USD 600/-
Students from Overseas	:	USD 300/-
Accompanying person (India)	:	INR 2000/-
Accompanying person (Overseas)	:	USD 300/-

Registration should be done through the website (<u>www.asset.org.in/sestec-2022</u>). The registration fees to be paid through online portal after the acceptance of the abstract.

Registration fee should be paid via NEFT:

A/C Name: SESTEC-2022 A/C No.: 41184040775 Bank Name: State Bank of India IFSC Code: SBIN0001268 MICR Code: 400002006

Sent a copy of receipt to: sestec2022@gmail.com

ADDRESS FOR CORRESPONDENCE

Arijit Sengupta

Secretary, SESTEC- 2022 Radiochemistry Division, RC&IG, RLG, BARC, Mumbai 400 085, INDIA

Telephone: 91-22-2559 9007 FAX: 91-22-25505151

Email: sestec2022@gmail.com; arijita@barc.gov.in

V.G. Mishra

Secretary, SESTEC- 2022

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BARC, Mumbai 400 085, INDIA Telephone: 91-22-2559 4595 FAX: 91-22-25505151

Email: sestec2022@gmail.com; ygmishra@barc.gov.in

ADDRESS FOR LOCAL CORRESPONDENCE

Dr. Rathod, V. K., ICT, Mumbai

Co-Convener, SESTEC 2022
Head, Chemical Engineering
Department ICT, Mumbai, India
Email: vk.rathod@ictmumbai.edu.in

Tel: +91-22-33612020

ACCOMMODATION

A number of affordable hotels of all ranges are available near the venue. The organizers are in a process of discussion with the management of selected hotels for availing special conference discount. Participants are requested to book their hotel accommodation directly. The Hotel names and the discounted tariffs will be updated on the conference website at a later date. For more updates on accommodation booking kindly see the website (www.sestec.org.in). Local transportation will be provided **only** from the hotels suggested by the organizers. Limited number of accommodations at Anushaktinagar for student participants on chargeable basis can be arranged by the organizers.

The accommodation booking forms for students can be downloaded from the website. Filled forms should be sent via email to the symposium secretary at sestec2022@gmail.com. The filled forms should reach on or before October 20, 2022.

ADVISORY COMMITTEE

Mohanty A. K., BARC, Mumbai Pandit A. B., ICT, Mumbai

Chairman Co-chairman

Asnani, C.K., UCIL, Jaduguda Bhasin V., BARC, Mumbai Clark, D.L., LANL, USA Geist, A., KIT, Germany Ghanty, T.K., BARC, Mumbai Grover, R.B., BRNS, Mumbai Kain, V., BARC, Mumbai Kalmykov, S.N., Moscow, Russia Kolev, S.D., Univ. Melbourne, Australia Lele, A., NCL, Pune Manchanda, V.K., Ex. BARC, Mumbai Manohar, S., BARC, Mumbai Moyer, B.A., ORNL, USA Ravi, K.V., NRB, Mumbai Reddy, S., IICT, Hyderabad Shenoy, K.T., BARC, Mumbai Singh, D., IREL, Mumbai Sinha, D.K., AMD, Hyderabad Srinivasan, K., CSMCRI, Bhavnagar Srivastava, D., NFC, Hyderabad Srivastava, J., HWB, Mumbai Tyagi, A.K., BARC, Mumbai Vasudeva Rao, P.R., HBNI, Mumbai Venkatraman, B., IGCAR, Kalpakkam Wickramasinghe, R., Univ. Arkansas, USA

Patrons

Vyas, K.N., DAE, Mumbai Joshi, J.B., Mumbai, India Mashelkar, R.A., Pune, India

ORGANISING COMMITTEE

Kannan S., BARC, Mumbai Mohapatra P.K., BARC, Mumbai Chairman Co-Chairman

Jaison P.G., BARC, Mumbai Sengupta A., BARC, Mumbai Mishra V. G., BARC, Mumbai Convener Secretary Secretary

Adak, A.K., BARC, Mumbai Ananthasivan, K., IGCAR, Kalpakkam Bhanja, K., HWD, BARC Bhardwaj, Y.K., BARC, Mumbai Bhatt, R.B., NRB, Tarapur Chaudhury, S., BARC, Mumbai Dani, U., BARC, Mumbai Das, T., BARC, Mumbai Gogate, P.R., ICT, Mumbai Kumar, A., BARC, Mumbai Kumar, S., BARC, Mumbai Mukhopadhayay, S, BARC, Mumbai Patwardhan, A., ICT, Mumbai Patra, C.N., BARC, Mumbai Rajesh, N., BITS Pilani, Hyderabad Rathode, V.K., ICT, Mumbai Saxena M.K., BARC, Mumbai Singh A.K., UED, Mumbai Singh, D.K., BARC, Mumbai Subbarao, R.V., IGCAR, Kalpakkam Sugilal, G., BARC, Mumbai Vaidya P.D., ICT, Mumbai Venkatesan, K.A., IGCAR, Kalpakkam

TECHNICAL COMMITTEE

Sivaraman N., IGCAR Bhattacharya A.,BARC, Mumbai Chairman Co-Chairman

Ansari, S, BARC, Mumbai Ali, S.M, ChED, BARC, Mumbai Banerjee, D., BARC, Mumbai Biswas, S., UED, BARC, Mumbai Chakrabarty, R., BARC, Mumbai Dey, T.K., MDS, BARC, Mumbai Ghosh, A.K., BARC, Mumbai Jat, R.A., BARC, Mumbai Kumar, Pranaw, BARC, Mumbai Mahanty, B.N., BARC, Mumbai Mallia, M.B., BARC, Mumbai Panja S., BARC, Mumbai Patwardhan, A.W., ICT, Mumbai Rao, Brahmananda, IGCAR, Kalpakkam Ramakumar, J., BARC, Mumbai Rawat, N., BARC, Mumbai Singh, S.K., BARC, Mumbai Singh, K.K., BARC, Mumbai Vincent, T., BARC, Mumbai Tripathi, R., BARC, Mumbai Vats, B.G., BARC, Mumbai Venkatesan, K.A., FCD, IGCAR Yadav, K.K., BARC, Mumbai

Local Organizing Committee (LOC)

Dr. Rathod, V. K., ICT, Mumbai

Chairman

Dr. Gogate P.R., ICT, Mumbai Dr. Vaidya, P.D., ICT, Mumbai Dr. Patwardhan, A., ICT, Mumbai