

Information Brochure

The Institution of Engineers (India)

A Century of Service to the Nation

All India Workshops

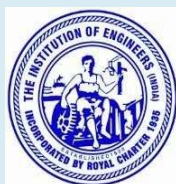
On

**“PLASMA GASIFICATION FOR CONVERSION OF MUNICIPAL
SOLID WASTE TO SYNGAS”**

Date: 05.11.2025

**Place: University College of Engineering,
BIT Campus, Tiruchirappalli**

Organised by



The Institution of Engineers (India)

Tiruchirappalli Local Centre

Under the Aegis of

Chemical Division Board, IEI

In Association with

*Department of Civil Engineering & Petrochemical Technology,
University College of Engineering-BIT Campus
Tiruchirappalli -620 024*

**Venue: B-217, Dr. APJ Abdul Kalam Auditorium,
University College of Engineering, BIT Campus,
Tiruchirappalli - 24**

About The Institution of Engineers (India)

The Institution of Engineers (India) or IEI is the largest multidisciplinary professional body that encompasses 15 engineering disciplines and gives engineers a global platform for sharing professional interest. IEI has membership strength of above 2.6 Lakhs. Established in 1920, with its headquarter Kolkata, IEI has served the engineering fraternity close to a century. During this period of time, IEI has been inextricably linked with the history of modern-day engineering.

In 1935, IEI was incorporated by Royal Charter and remains the only professional body in India which has been accorded this honour. Today, its quest for professional excellence has given it a place of pride in almost every prestigious and relevant organization across the globe. It provides a vast array of technical, professional and supporting services to the Government, Industries, Academia and the Engineering fraternity, operating through its 124 Centres located across the country and 6 overseas chapters. Besides, IEI has bilateral agreements with about 31 international bodies and membership of another 8 international bodies of the developed nations across the globe.

Being recognized as a Scientific and Research Organization (SIRO) by the Department of Scientific and Industrial Research, Ministry of Science and Technology, Government of India, IEI promotes the cause of research and development by providing Grant-in-Aid support to undergraduate, post graduate students and PhD Research Scholars of Engineering Institutions and Universities.

IEI has been recognized as Scientific and Industrial Research Organization (SIRO) by the Ministry of Science & Technology, Government of India and besides conducting its own research, provides Grant-in-aid to UG/PG/PhD students of Engineering institutes and universities.

IEI holds the International Professional Engineers (IntPE) Register for India under the global International Professional Engineers Alliance (IntPEA). The institution also awards the Professional Engineers (PE) Certification.

IEI in collaboration with Springer regularly publishes peer-reviewed international journal in five series, namely, Series A, Series B, Series C, Series D and Series E covering fifteen engineering disciplines.

About Tiruchirappalli Local Centre:

Tiruchirappalli Sub-Centre of IE (I) was formed in 1973 and was elevated as Local Centre in 1987 after the membership crossed the 500th mark. Presently, the membership is more than 2605. Our Local Center is functioning in its own premises located in BHEL campus on the land leased by BHEL, Tiruchirappalli. The building was declared open by Shri P.S Gupta, CMD, and BHEL in August 1990. The institution houses a library having more than 5000 books from various divisions for the benefit of students and members. Our Centre celebrated its Golden Jubilee during this to mark the completion of 50 years of its formation and its meritorious service to the Engineering community. The Local Centre has a very close liaison with leading engineering organizations, professional Institutions and sister professional bodies in the conduct of Technical activities. For details, please see: <http://ieitiruchi.org/>

IEI TLC Address:

IE(I) Tiruchirappalli Local Centre,
BHEL Main Office Road, BHEL
Tiruchirappalli 620014, tiruchirappallilc@ieindia.org, 9442571576

ABOUT THE UNIVERSITY COLLEGE OF ENGINEERING(UCE), BITCAMPUS, ANNA UNIVERSITY, TIRUCHIRAPPALLI

University College of Engineering (UCE), BIT Campus, Anna University, Tiruchirappalli has been established in 1999 and now functioning as a constituent college of Anna University, Chennai. UCEBIT Campus, Anna University has become sufficiently multifaceted with 7 Faculties with 16 Teaching Departments including some specialized programmes. Our institute has NBA Accreditation and offers 10 B.E/B.Tech. Undergraduate degree programmes, 8 M.E/M.Tech Master's degree programmes along with MBA, MCA and Ph.D. programmes in all discipline with 4628 students in the campus. We are the TEQIP II sponsored institution with UGC 2f & 12B status. The unique dimension of the institute's educational profile harnesses the research and teaching interests of the faculty to forge its own character and to bring an extra value-addition to it. The departments of our institute are carrying out specialized and socially responsive interdisciplinary research. Our institute has 2 Centers funded by DST and AICTE. UCE, BIT Campus received research and consultancy from various funding agencies of India for a total value of 300 million Rupees. The main objective of the institutes to generate a horde of highly creative professionals, who can contribute not only to the Human Resource Development and also to Nation building exercise.

ABOUT THE DEPARTMENT

The Department of Civil Engineering has commenced B.E. Civil Engineering course in the year 2008 with an intake of 120 seats. B.E. Civil Engineering Tamil Medium was started in the year 2010 with 30 seats of intake. M.E. Environmental Engineering course was commenced in the year 2010 with 12 seats. In addition, the department offers Part-Time M.E. Course in Structural Engineering with 25 seats. Since its inception in the year 2007, the Department has conducted various workshops, a national seminar, national level technical symposiums and conferences.

The Department of Petrochemical Technology, University College of Engineering (UCE), BIT Campus, Tiruchirappalli, was founded in 1999 with the objective of providing exceptional technical education. Our mission is to nurture young talent into dynamic engineers, equipping them with practical skills to confidently tackle the complexities of the technical world. The Department has received accreditation from the National Board of Accreditation (NBA) for the period 2018-2022. The Department offers B.Tech in Petrochemical Technology, M.Tech in Chemical Engineering, and M.S. and Ph.D programmes in related areas, providing students with comprehensive knowledge and expertise in Petrochemical Technology and Chemical Engineering.

About the Theme:

Municipal Solid Waste (MSW) management is a critical part of environmental protection and urban cleanliness. With the growing urban population cities are facing severe challenges in handling large volumes of waste generated daily. Traditional methods such as landfilling, and incineration not only consume land but also cause air water and soil pollution. Plasma Gasification is an emerging high temperature thermal technology that offers an ecofriendly and sustainable solution for treating non-recyclable solid waste. This workshop will introduce the concept of plasma gasification and its relevance in modern waste to energy systems. Participants will gain insight into the components of a plasma gasification system including feedstock preparation reactor design plasma torch functioning and syngas purification units. The workshop will also cover the wide ranging applications of syngas in electricity generation and synthetic fuel production ability to handle a wide variety of waste types including hazardous and non-recyclable materials with minimal environmental impact. Unlike conventional methods it significantly reduces harmful emissions such as dioxins and furans offering a cleaner approach to urban waste disposal. This aligns with global efforts toward net zero emissions and energy circularity making plasma gasification a future ready solution. The expected outcomes of the workshop are to enhance participants understanding of the science and engineering behind plasma gasification.

SubThemes:

- **Plasma Gasification Fundamentals**
Understanding the science behind plasma technology and how it differs from conventional waste treatment methods.
 - **System Components & Design**
Exploring feedstock preparation, plasma torch operation, reactor configuration, and syngas purification units.
 - **Syngas Utilization Pathways**
Applications of syngas in electricity generation, hydrogen production, and synthetic fuel manufacturing.
 - **Environmental & Sustainability Benefits**
Reducing emissions, handling hazardous/non-recyclable wastes, and contributing to net-zero carbon goals.
 - **Global Case Studies & Economic Feasibility**
Reviewing successful plasma gasification projects, cost considerations, and scalability for urban waste management.
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Resource Persons

Expert members from R&D sector, industries and various leading academic institutions.

Eligibility

IEI Members, UG Students, PG Scholars, Faculty Members and Research Scholars

How to Apply:

Registration for the seminar can be made by sending the duly filled in application through mail or by filling the registration link given below on or before 31.10.2025.

Registration Link:

https://docs.google.com/forms/d/e/1FAIpQLSdJCsSNC7usUF7eT_wWV1gg_UNm4kWeQZTqKtm0-CjPVuJdpA/viewform?usp=header

Note:

- Limited seats are only available
- On-spot registration is also available but Pre-registration is mandatory
- The registration will be confirmed on first come first served basis

Registration Fee

Industry Person/Non Member/Research Scholars: **Rs.375/-**

Student Member of **IEI: Rs.300/-** (Registration fee includes Tea & Lunch during Seminar)

Registration fee includes Tea, Lunch during Seminar, Workshop kit consisting of a notepad and pen will be provided

NATIONAL ORGANIZING COMMITTEE

Chairman:	Er. VB Singh, President, IEI
Co-Chairman:	Dr Raghupatruni Bhima Rao, Chairman Chemical Engineering Division Board, IEI
Convener	Dr G.Venkatesan AP-Civil, Dr N. Stalin AP-Petro, UCE, –BIT Campus
Members	Prof (Dr) G Madhu, Member, CHDB, IEI Prof(Dr) Dr Satish Chandra Gupta, Member, CHDB, IEI Prof (Dr) Shilpa Tripathi, Member, CHDB, IEI Er Subhash Jayantilal Ghelani, Member, CHDB, IEI
	Secretary: Er. SP Lakshmanan, Hon. Secretary, Tiruchirappalli Local Centre, IEI

ORGANIZING COMMITTEE

Chief Patron	The Convener Committee Members, Anna University, Chennai
Patron	Prof. J. Prakash, Registrar, Anna University, Chennai
Convener	Dr.R.Baskaran , Director (CCC) , Anna University, Chennai.
Organizing Secretary	Prof.T.Senthil kumar, Dean, UCE-BIT Campus
Chairman:	Dr. S. RAVIMARAN, Chairman, IEI Tiruchirappalli Local Centre

CONTACT DETAILS

Er. S.P Lakshmanan Secretary, IEI Tiruchirappalli Local Centre 9442571576, tiruchirapallilc@ieindia.org	Dr G.Venkatesan, Dr N. Stalin, University College of Engineering– BITCampus, Tiruchirappalli 620 024 9976577636 ,9486814120, mnstalin@gmail.com, gvenkat1972@yahoo.co.in,
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Registration Form

All India Workshops

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**“PLASMA GASIFICATION FOR CONVERSION OF MUNICIPAL SOLID WASTE
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Date: 05.11.2025

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Engineering, BIT Campus, Tiruchirappalli**

Name:(Block Letters)

Organization/Institution:.....

Designation/Class.....

Branch:..... IEI

Membership Number &Division:.....

Address for communication...

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Mobile:.....Email:.....

I/WeencloseaCash/NEFTdetailsforRs.....TransactionIDNo.....Dated.....

Signature