Vol. 5

Issue 04- Oct to Dec, 2022

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Educational and Research Institute
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Maduravoyal , Chennai - 600 095

FACULTY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING

MEXPRESS

VOL. 5 ISSUE 4- 2022

HOD-DESK

MESSAGE

By,
Dr.K.RAJAN.,
HOD / MECHANICAL ENGG DEPT.

Greetings!!

I am glad that Dr.MGR University has provided us an opportunity and vision to support the release of Newsletter series through all the quarters of each academic year. It's a forum to connect with all stakeholder. I am very happy that the department is releasing the News letter for the period October 2022 to December 2022. Wishing for many more series and happy reading.

MESSAGE

By,

Dr.A.MANOJ BABU.,
DEPUTY HOD/MECHANICAL ENGG DEPT.

The Newsletter is a mirror that reflects the activities of the department. Students from all walks of life find their voices heard in this space that welcomes and encourages diversity of thoughts and perspectives with open arm. Pleased to see that our department is releasing its Fourth quarter Newsletter for 2022. I wish the purpose is realized and achieved.

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MESSAGE

It gives us immense pleasure to be an integral part of this news letter, a communication method suited to the needs of the time which would carry messages to all concerned about important events, happenings and achievements. This certainly should play an effective role in creating a sense of belongingness amongst faculty team, alumni and students. Life can't have rewinds rather only flashbacks. Talented alumni will likely have a wealth of experience and skills to share with current students via talks and newsletters. We consider that our endeavors will be successful only when ,after reading these articles you get motivated to contribute more in future issues.

EDITORIAL BOARD

VOL. 5 ISSUE 4- 2022

ACTION CORNER

SNIPPETS FROM PALS

OCTOBER TO DECEMBER

DATE	EVENT TITLE	SPEAKERS	EVENT COORDINATE
17-Oct-2022 to 28-Oct-2022	Certificate Training on CATIA V5 Software	Mr. JOGINDER SINGH Application Engineer Dassault System certified Professional	
25-Oct-2022	Subject Lecture on Flexible Manufacturing System	Mr. VIJAYARAGHUNATHAN V Assistant Professor Department of Mechanical Engineering Dr.M.G.R Educational and Research Institute	
14-Nov-2022	Alumni Lecture Series-12 on "Avenues for Mechanical Engineering Students In Software Industry Besides Mechanical Field"	Mr. N. SRIHARISH Software Developer Infosys Pvt.,Ltd.,	

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ARTICLES CORNER

5 STEPS YOU SHOULD TAKE TO BECOME A GREAT MECHANICAL ENGINEER: THIS YEAR

BY,
. MR. ANDREW NALLAYAN,
ASST. PROFESSOR/ MECH ENGINEERING.

You probably already have an idea about what to expect when studying Mechanical Engineering but what about the jobs you can look forward to when taking such a degree?
If your answer is the typical "be solution-oriented, creative, and have at least passing knowledge of Math and Technology" you're only at the base of the mountain.
There's still some hiking to do to reach the peak.
We're here to fill in the blanks and cover the things that will truly make you stand out on the job market if you study a Bachelor's degree in Mechanical Engineering. So be sure to read about these steps when considering undergraduate studies in Mechanical Engineering.

What is Mechanical Engineering?

Before we dive into the steps that will help you become a successful mechanical engineer, let's look at what Mechanical Engineering really is and what you can expect during your studies.
Mechanical Engineering focuses on the design, manufacturing, testing, and improvement of mechanical systems, which are used in virtually any industry you can think of.
One of the reasons Mechanical Engineering students choose this discipline is its versatility and the various career options available after graduation. You can work in fields, like construction, the automotive industry, robotics, the energy sector, and many others.

The type of courses you'll take will vary depending on the curriculum of your Bachelor's programme. In general, you can expect to study subjects like, Engineering Economy, Materials Science, Technical Writing, Design & Automation, Thermodynamics, Mathematics, Engineering Analysis, Engineering Service and Statistics etc.

Mechanical Engineering skills

To be a successful mechanical engineer, some of the most important skills you can develop are:

Problem-solving: essential to solve all the complex puzzles that stand between you and the perfect mechanical product/device/system

Creativity: the only way to come up with innovative solutions, see what others do not, and create something from nothing

Communication: needed to work with your team, and even more important when explaining clients and users how to use your product or solutions

Teamwork: mechanical engineers often work in groups, which helps them brainstorm ideas, compare suggestions, and find the right answer to a given challenge or task

Math skills: solving mechanical engineering problems most often requires the use of mathematical principles, like Calculus or Statistics

1. Choose a good international engineering school to make a name for yourself:

We live in a world where names sell. This can't come as a surprise to you, but it does mean you have to be extra careful about what you include in your CV and how you can impress your higher-ups, even before they get to see your great mechanical skills at work.

If you really want to stand out from the crowd, you should orient your Masters studies towards prestigious engineering schools. Some of the most renowned and top-ranked engineering schools in the world include MIT,UC Berkeley ,or RWTH Aachen, among others.

2. Make sure you pick the right country for your Post graduate programme in Mechanical Engineering:

Whoever you are and whatever you choose to do, your forming years are important. This applies to you too, aspiring mechanical engineer! The more cultures and people you get to know, the more you learn about different ways to find solutions to problems. And isn't this what all engineers do?

And here's a secret: the countries where most Mechanical Engineering degrees are available are also likely to need most Mechanical Engineers. USA , UK , Canada and Germany are the leading countries with lots of scope for doing your Masters ,since all leading mechanical giants have their establishments there.

3. Start gaining experience as a mechanical engineer early on:

Yes, universities matter. Yes, choosing a country which needs mechanical engineers matters. But you know what's something employers value even more? Experience! Hardcore, getting-hands-dirty experience.

Start developing your Mechanical Engineering skills by doing internships, taking part-time jobs, volunteering, or shadowing professionals during your undergraduate degree. You'll have the best chance to not only graduate with a great diploma, but also with practical insight about how to get the job done.

Consider this as an investment, seeing how you offer your time now, so you could

exchange it later for immense satisfaction , money, power, and world domination.

4. Take the example of famous mechanical engineers:

Quick: what do Nikola Tesla, Rudolf Diesel, Karl Benz, and Henry Ford have in common? No, they're not all "car parts", but they are Mechanical Engineering graduates! They are some of those who managed to stay on top of their field and bring new and fresh ideas to the table.

The point is this: you need to know about the big names in your field and follow their methods, to avoid making rookie mistakes and get inspired when you're stuck or everything seems overwhelming.

5. Mechanical Engineering careers and salaries:

Mechanical Engineering jobs are not only profitable, but also in high demand. The number of available work opportunities is both stable and growing. According to the US Bureau of Labour Statistics, there will be an enormous rise in jobs through 2028.

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LEARN AND EARN

BY,
S. DEEPANSHU ROY
2 ND YEAR /MECH DEPT

Learn and Earn is a concept that emphasizes the acquisition of knowledge and skills as a means to generate income and achieve financial independence. It combines the pursuit of education or training with opportunities to earn income or gain practical experience simultaneously. The Learn and Earn model recognizes the importance of lifelong learning and the dynamic nature of today's job market, where continuous learning is crucial for personal growth and professional success

The concept of Learn and Earn can be applied in various ways, depending on the context and individual circumstances. Here are a a few examples:

1. Work-Study Programs:
Many educational institutions offer work-study programs that allow students to work part-time while pursuing their studies. These programs provide students with financial assistance and valuable work experience related to their field of study. By working and earning income, students can contribute to their education expenses and also gain practical skills and industry knowledge.

2. Internships and Apprenticeships:
Internships and apprenticeships provide individuals with the opportunity to learn on the job while earning a stipend or salary. These programs are commonly offered in industries such as technology, finance, healthcare, and manufacturing. By participating in internships or apprenticeships, individuals can acquire real-world experience, build a professional network, and enhance their employability.

3. Online Learning and Freelancing:
With the advent of technology, online learning platforms have become increasingly popular. Individuals can enroll in online courses or training programs to acquire new skills or upgrade existing ones. Simultaneously, they can leverage those skills to offer freelance services and earn income. Freelancing platforms provide a wide range of opportunities, such as graphic design, content writing, software development, digital marketing, and more.

4. Entrepreneurship and Startup Culture:
Learn and Earn can also be applied in the entrepreneurial context. Aspiring entrepreneurs can learn about business management, marketing, finance, and other essential skills through workshops, courses, or mentorship programs. They can then apply that knowledge to start their own businesses or join startup ventures. By continuously learning and adapting, entrepreneurs increase their chances of success and financial gain.

The Learn and Earn model fosters a mindset of continuous growth and self-improvement. It recognizes that knowledge and skills are valuable assets in the modern economy. By actively seeking opportunities to learn and applying that knowledge to generate income, individuals can enhance their employability, create new career paths, and achieve financial stability.

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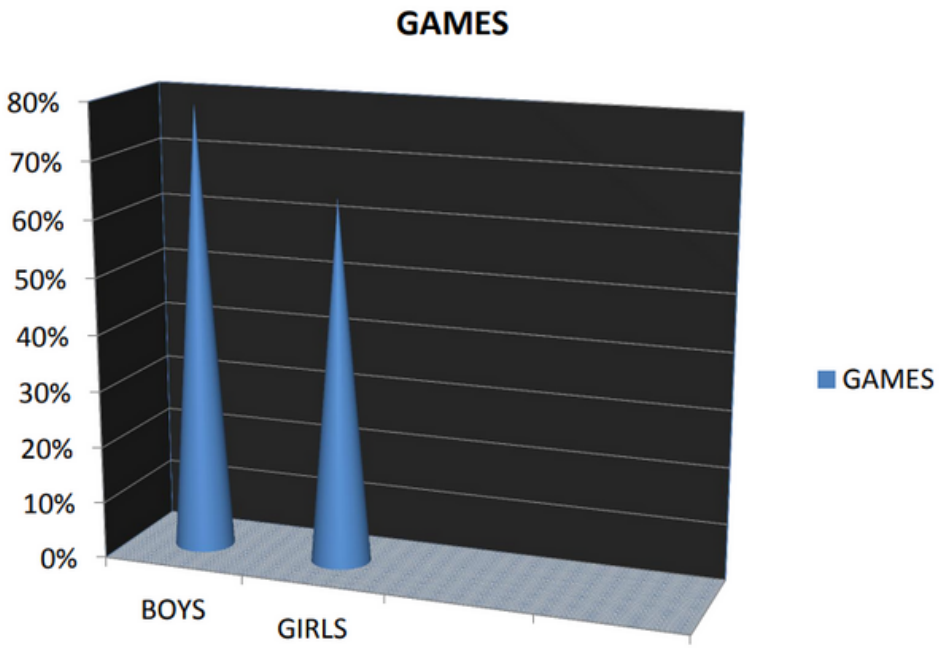
BY,
MATHAVAN .,
3RD YEAR /MECH DEPT.

Jun 13, 2022 7 min read History of Video Games for KidsDid you know 79% of boys and 64% of girls play video or computer games regularly? Video games are everywhere nowadays! With that said, video games are a relatively new hobby. Video games did not start becoming popular until computer chips became more accessible in the 1970s and 1980s.

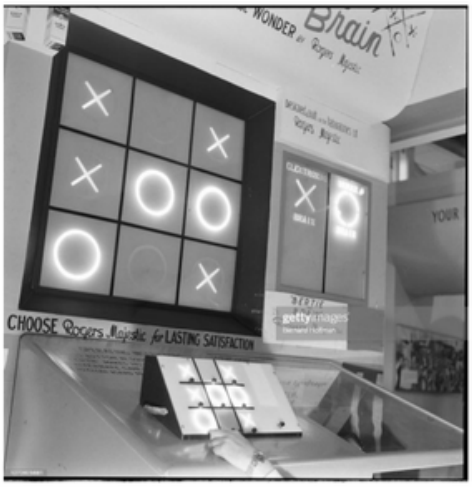
How have video games evolved from the very first experimental games to today? Read more to find out all about the history of video games!Discover the history of video gamestimeline and factsToday we'll guide you from early video games before 1983 such as OXO, all the way through today's modern games such as Roblox and Minecraft.Early video games: before 1983



AVERAGE PERCENTAGE OF PLAYING GAMES IN LIFE TIME

The very first video game is considered to be OXO, a tic-tac-toe simulator created in 1952 in a lab at Cambridge University in England. The game's display showed the tic-tac-toe board and was played on a vacuum tube computer (to learn what a vacuum tube computer is check out our article on the history of computer hardware!) Even though the game was really simple, the game used artificial intelligence to play against the human opponent!The first publicly available video game was Spacewar created in 1962 by students at the Massachusetts Institute of Technology (MIT).

OXO GAME



The object of the two player game was to destroy your opponent's spaceship by either shooting it or crashing your ship into theirs while avoiding the black hole in the middle of the screen. The game was never sold to make money but the code for it was released publicly. The game spread to other universities and hobbyists.The first home video game console is the Magnavox Odyssey, released in 1972 and invented by Ralph Baer, an American inventor. All of the Odyssey's games consisted of three squares and a vertical line. Certain games required players to tape semi-transparent "screen overlays" onto their TVs. Certain games didn't even track score for the players! The Odyssey didn't sell well (350,000 units) but it paved the way for more innovation.

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PAPER FACE MASK

BY,
MADHU SUDARSANAN.,
2 ND YEAR /ROBO DEPT.

I was in the Diploma College then. First time in life, heard the terms “Pandemic”, “Mask”, “Covid/Corona”, “Quarantine”, etc. Even after 3 years, I still have a mask and a hand sanitizer in my bag and that has become an integral part of my life. Long never-ending holidays had been very frustrating and maddening at that time. To avoid turning crazy, I decided to do something close to my heart and creative. Why shouldn’t I try making a mask out of newspaper? my favourite craft material! This paper mask is made out of a single newspaper sheet. The folds are bit tricky to get the cup shape that sits on the mouth and nose. I tried it on my favourite teddy bear and it sits perfectly on her face! I made this paper mask as a symbolic representation of its role during the pandemic.

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SUCCESS STORY OF BINNY BANSAL

BY,
RAVI RAJAN N.,
3 RD YEAR /ROBO DEPT.

Inspirational Success Story of Binny Bansal, Flipkart Co-Founder

Binny Bansal was born in 1983 at Chandigarh, Punjab, Haryana. Binny is an Indian billionaire Internet entrepreneur. His father was first in the army. His mother is a government employee. After retirement, his father is an employee chief manager in the bank. Binny studied at St. Anne's school in Chandigarh.

He received his BTech degree in Computer Science degree from the Indian Institute of Technology Delhi - IIT Delhi. Interestingly, Rohit Bansal, Snapdeal cofounder was also his batchmate.

After receiving the BTech degree, Bansal worked for Sarnoff Corp, a research and development company. Binny had no brother & sister. Bansal currently lives in Bangalore with Trisha, his wife.

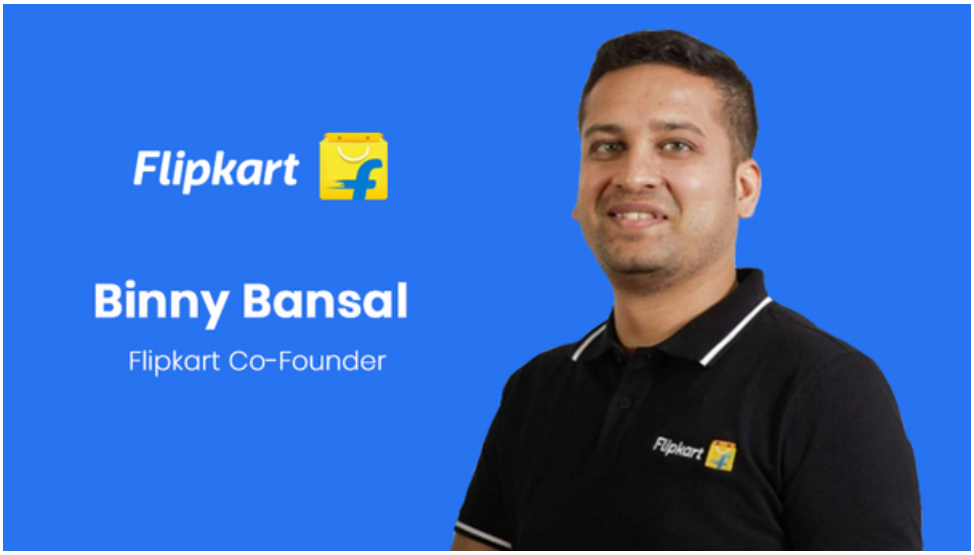
Before co-founding Flipkart, he had been rejected by Google twice. Binny was employed by an online company, Amazon for nine months as a software engineer. Before joining Amazon, Bansal had worked with Sarnoff Corporation where he developed a lane sensor device for cars. Binny is known as a software engineer.

Binny associated with his friend Sachin Bansal. In 2007, Bansal and Sachin Bansal, his business partner realized that the E-commerce market in India was very small. After leaving Amazon in 2007, they planned to launch an online bookstore, later they founded Flipkart in a two-storeyed building in Koramangala as an e-commerce company. Many people think that Binny Bansal and Sachin Bansal are both brothers.

Both of them worked in Amazon, an American multinational technology company for a while before founding Flipkart. In the early days, Binny Bansal and Sachin Bansal used to distribute books on their scooters.

The result of his hard work was that Flipkart gradually grew and incorporated many categories of products, including electrical equipment, electronics, fashion, sports, home appliances, books, etc.

Binny became the CEO of Flipkart In 2016, where he worked on direction, strategic development, and business management. Flipkart emerged as the first e-commerce company in India. Walmart acquired a 77% stake in the Flipkart group In 2018. After the acquisition, Binny Bansal continued as Group CEO.



PUBLICATIONS

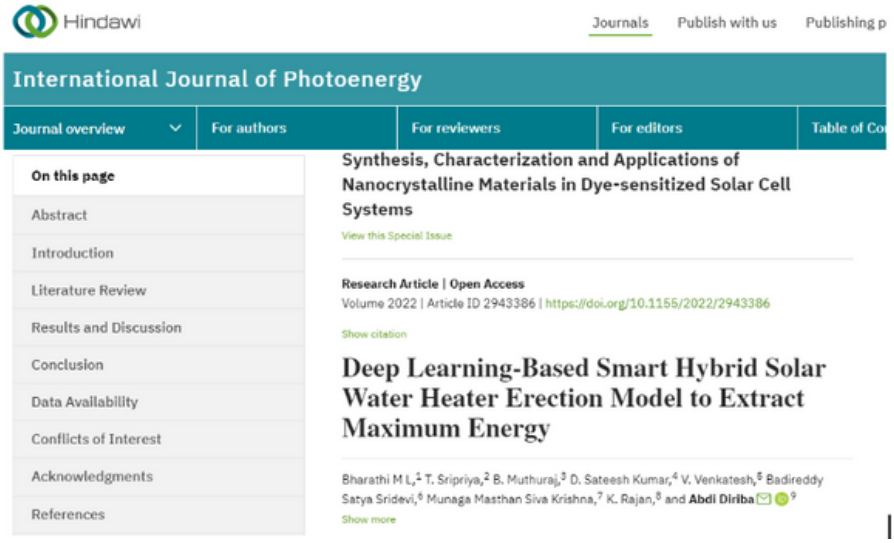
STAFF PUBLICATIONS

OCT - DEC 2022

1. DEEP LEARNING-BASED SMART HYBRID SOLAR WATER HEATER ERECTION MODEL TO EXTRACT MAXIMUM ENERGY,

INTERNATIONAL JOURNAL OF PHOTOENERGY, VOL. , NO. 1, PP.8-0.849

K RAJAN., MECHANICAL ENGINEERING, FACULTY OF ENGINEERING AND TECHNOLOGY



2.INVESTIGATION OF TIO2 NANO FILLER IN MECHANICAL, THERMAL BEHAVIOUR OF SISAL/JUTE FIBER REINFORCED INTERPENETRATING POLYMER NETWORK (IPN) COMPOSITES,

MATERIALS RESEARCH, VOL. , NO. , PP.-0.843

KUTTYNADAR RAJAMMAL VIJAYA KUMAR., MECHANICAL ENGINEERING, FACULTY OF ENGINEERING AND TECHNOLOGY

KUMARAVIJAYENDRAGOPAL., MECHANICAL ENGINEERING, FACULTY OF ENGINEERING AND TECHNOLOGY

Investigation of TiO_2 Nano Filler in Mechanical, Thermal Behaviour of Sisal/Jute Fiber Reinforced Interpenetrating Polymer Network (IPN) Composites

Kumar Vijayendra Gopal[a], Kuttynadar Rajammal Vijaya Kumar[a], Gopi Suresh[b], Vezhavendhan Rajasekharan[c], Prasumanna Krishnamurthy Nagarajan[b], Chinathambi Muthukaruppan Meenakshi[d]*

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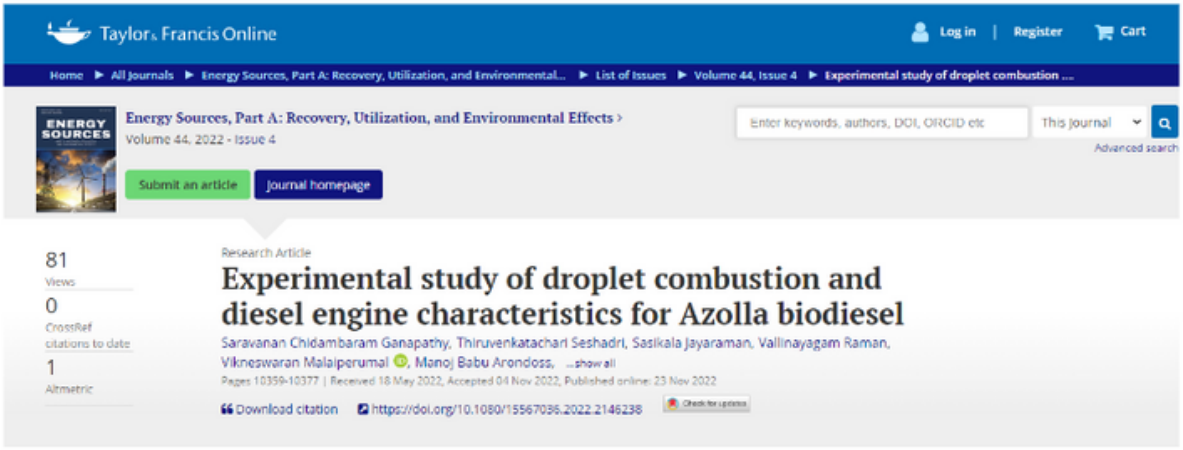
3.EXPERIMENTAL STUDY OF DROPLET COMBUSTION AND DIESEL ENGINE CHARACTERISTICS FOR AZOLLA BIODIESEL,
ENERGY SOURCES, PART A: RECOVERY, UTILIZATION AND ENVIRONMENTAL EFFECTS, VOL. 4, NO. 10359, PP.10377-0.929
DR.A.MANOJ BABU., MECHANICAL ENGINEERING, FACULTY OF ENGINEERING AND TECHNOLOGY



4.EVALUATION OF PURE TITANIUM WELDED JOINTS PRODUCED BY UNDERWATER FRICTION STIR WELDING,
ADVANCES IN MATERIALS SCIENCE AND ENGINEERING, VOL. , NO. 1, PP.12-0.802
S MEIKEERTHY., MECHANICAL ENGINEERING, FACULTY OF ENGINEERING AND TECHNOLOGY
N ETHIRAJ., MECHANICAL ENGINEERING, FACULTY OF ENGINEERING AND TECHNOLOGY

5. MODIFIED ZEOLITE CATALYSTS FOR EFFICIENT PROCESSING OF N-HEXANE AND GASOLINE FRACTION,

RASAYAN JOURNAL OF CHEMISTRY, VOL. 4, NO. 2442, PP.2449-0.880

S SENDILVELAN., MECHANICAL ENGINEERING, FACULTY OF ENGINEERING AND TECHNOLOGY

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MODIFIED ZEOLITE CATALYSTS FOR EFFICIENT PROCESSING OF N-HEXANE AND GASOLINE FRACTION

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