

# Technology Roundup

## A NEWS BULLETIN

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- 12<sup>th</sup> International Defense Exhibition and Seminar (IDEAS)
- 3<sup>rd</sup> International Nursing Research Conference 2024
- Global Conference on Management and Economics
- 4<sup>th</sup> International Conference on Knowledge Engineering and Knowledge Management
- 3<sup>rd</sup> Asian Conference on Engineering and Information
- 9<sup>th</sup> International Neonatology Association Conference
- International Symposium of Robotics Research (ISRR)

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### Tech & Trade Offers



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### Govt to Import 50% of Goods via Gwadar Port

Pakistan has decided to import fifty percent of key items, including wheat, sugar, and fertilizer, through Gwadar Port. In the future, the volume of exports from this port is expected to increase. Gwadar Port serves as an international trade hub for Pakistan and is regarded as a strategic asset. The full operation of Gwadar Port is essential for providing employment to the residents of Balochistan and ensuring the province's economic stability. Additionally, the efficient functioning of Gwadar Port will help alleviate the pressure on Karachi Port regarding imports and exports. The foreign exchange generated by Gwadar Port is anticipated to have a positive impact on the local community's quality of life. Once Gwadar Port is fully operational, we should see a noticeable decrease in the poverty rate in the province, along with a significant reduction in unemployment. Local residents will be given priority for job opportunities at Gwadar Port.



### Shan Foods and Symrise Invest \$20 Million in Pakistan's Culinary Market

September 24, 2024 (MLN): Shan Foods is set to invest up to \$20 million in Pakistan's culinary sector in partnership with German company Symrise AG. Co-Chairperson Sammer Sultan announced that the company has already invested \$2 million in a manufacturing plant in Karachi, with plans for further investment in the coming years. The recently inaugurated state-of-the-art facility will support the strategic partnership, aimed at driving food innovation for Pakistan's market. Since entering an exclusive partnership with Symrise in April 2023, Shan Foods has focused on developing savory products for local and global brands. The new facility is expected to cater to the growing demand in Pakistan's multimillion-dollar savory market, while also creating sustainable job opportunities. Sultan emphasized the importance of enhancing local production and reducing reliance on imports. Looking ahead, both companies plan to target international markets, particularly the UAE and Saudi Arabia. This collaboration is poised to establish them as leaders in the food industry, setting new standards for innovation and quality.



### Lals Chocolates and Patisserie Wins 2024 Pastry Discovery Gem Award in Dubai

At the 2024 La Liste Awards in Paris, Lals Chocolates and Patisserie has been honored with the prestigious Pastry Discovery Gem Award for 2024. This accolade recognizes founder Lal Majid and CEO Madiha Sultan Tai for their remarkable creativity, innovation, and craftsmanship. The Pastry Discovery Gem Award celebrates exceptional bakeries, afternoon tea venues, and dessert restaurants known for their extraordinary dedication to quality. La Liste launched the World's Best Pastry Shop Selection in 2022 in collaboration with Cacao Barry, evaluating over 3,000 pastry shops, bakeries, tea rooms, dessert restaurants, and coffee



shops across more than 80 countries. Notably, Lals is the first Pakistani establishment to receive such recognition on this scale, alongside UAE-based figures like Christopher Devoille from Royal Atlantis. This award highlights Lal Majid's enduring commitment to excellence and Madiha Sultan's dedication to promoting heritage craftsmanship and talent on both regional and global stages. The award will be prominently displayed at Lals Patisserie's flagship store in Karachi, Pakistan.

### Pakistan Mango Exports Generate \$46.7 Million in 2024

In 2024, Pakistan achieved significant success in its agricultural exports, generating \$46.7 million from mango sales. Renowned for its exceptional varieties like Sindhri, Chaunsa, and



Anwar Ratol, the mango industry plays a crucial role in the country's economy. This achievement highlights the increasing global demand for Pakistani mangoes, alongside advancements in agricultural practices, infrastructure, and export strategies. Major markets included the Middle East, Europe, and North America, where consumers appreciate the unique sweetness and quality of these mangoes. This revenue growth emphasizes the mango sector's importance within Pakistan's overall agricultural export landscape. The \$46.7 million from

mango exports in 2024 boosts Pakistan's economy, can create jobs, and enhances foreign exchange reserves. This encourages investment in agriculture and strengthens the global presence of Pakistani mangoes, improving rural living standards.

### Innovative Cellulosic Biofuel Technology

Terragia Biofuel, a technology startup focused on next-generation biofuels, has completed a \$6 million seed funding round, led by Engine Ventures and Energy Impact Partners (EIP). The company plans to use this capital to commercialize its innovative biology-based method for converting cellulosic biomass into ethanol and other products, expand its workforce, and establish partnerships with leading biofuel producers. Terragia's technology employs engineered thermophilic bacteria to break down cellulosic biomass, producing ethanol and other chemicals. This process stands out from traditional methods by utilizing a one step consolidated bioprocess without the need for additional enzymes. The approach also includes mechanical disruption during fermentation, eliminating the need for costly thermochemical pretreatment. Scientists noted that cellulosic biofuels provide a pathway to low-carbon fuels for aviation and other hard-to-electrify transport modes, playing a vital role in climate stabilization. Terragia's one step biological conversion method could significantly reduce costs compared to other processes. Terragia's CTO and Co-Founder, Lee Lynd, emphasized that converting ethanol to fuels for planes, ships, and trucks addresses nearly half of future global transportation energy demands, representing a trillion-dollar market. If fully implemented, Terragia's technology could displace 3 gigatons of CO<sub>2</sub> emissions annually and facilitate even greater CO<sub>2</sub> capture.



### Solid-State EV Battery that Survives 1112°F Thermal Runaway

A prototype solid-state battery called the Goliath P1, developed by UK startup Ilika, is gaining attention in the electric vehicle (EV) sector due to its impressive safety features. It recently



passed the nail penetration test, a critical safety assessment that simulates catastrophic events often leading to dangerous thermal runaway, a risk associated with traditional lithium-ion batteries that use liquid electrolytes. During the test, the Goliath P1, utilizing a solid electrolyte, maintained a temperature below 176°F (80°C), significantly lower than the 1112°F (600°C) typically reached in thermal runaway incidents with lithium-ion batteries. According to

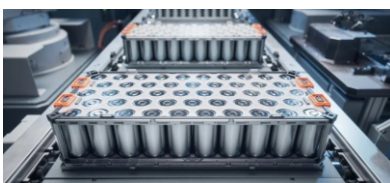
the company, in the nail penetration tests, the P1 cells neither exploded nor caught fire, with external temperatures remaining below 80°C. Moreover, the Goliath P1 did not exhibit the hazardous swelling, rupturing or fire that usually occurs when conventional lithium-ion batteries fail. Dr. James Robinson, leader of the UK Safebatt Project aimed at enhancing EV battery safety, expressed enthusiasm over these results. Although more testing is needed, this cell type shows a clear safety advantage in nail penetration tests compared to conventional state-of-the-art batteries.

### Scientists Develop Air-Driven Propeller for Vessels and Ferries

Researchers at the University of Sharjah in the UAE have developed an eco-friendly propeller powered by compressed air tanks. This innovative propeller system is designed to replace the electric and diesel engines currently used to operate ferries on set routes. The team emphasizes that this propulsion system is not only more cost-effective and energy-efficient than conventional engines but also environmentally friendly. The pneumatic system is expected to be more economically viable and energy-efficient. The onboard compressed air tanks can be refilled at the end of each trip while passengers board. The scientists view their invention as a significant step toward transitioning from traditional engines to pneumatic propulsion, anticipating major environmental benefits, including reduced air emissions, decreased water pollution from fuel and engine oils, and lower noise levels. They propose a pneumatically powered boat as an alternative propulsion method. Unlike typical propulsion systems, compressed air systems provide effective, clean, and sustainable alternatives. The performance of the pneumatic system was analyzed and compared to electric propulsion systems powered by batteries. A life cycle analysis was also conducted to measure reductions in carbon dioxide emissions resulting from the pneumatic system. The experimental results demonstrated that compressed air is a viable alternative to electric motors in terms of eco-friendliness, efficiency, and sustainability.



### Game-Changer Manganese Battery Boosts EV Performance



Researchers at Yokohama National University in Japan have made a significant breakthrough in electric vehicle (EV) battery technology with a new manganese-enhanced lithium-ion (Li-ion) battery. This battery achieves an energy density of 820 watt-hours per kilogram (Wh/kg), surpassing the 750 Wh/kg of

traditional nickel-cobalt (NiCo) batteries and showing no voltage decay. This innovation could reshape the EV industry by providing a more sustainable and cost-effective alternative. While NiCo batteries have been favored for their high energy density, the scarcity and cost of nickel and cobalt raise sustainability concerns. Manganese, being more abundant and affordable, presents a viable alternative. Historically, manganese-based batteries faced challenges like voltage decay and lower energy density. The research team addressed these issues by using a monoclinic layered structure in the LiMnO<sub>2</sub> anode, which enables a phase transition that enhances performance and stability. Through extensive studies using X-ray diffraction and electrochemical methods, the team found that the monoclinic structure is key to activating the necessary transitions. This allowed for the synthesis of nanostructured LiMnO<sub>2</sub> with a high surface area using a simple solid-state reaction and calcination process.

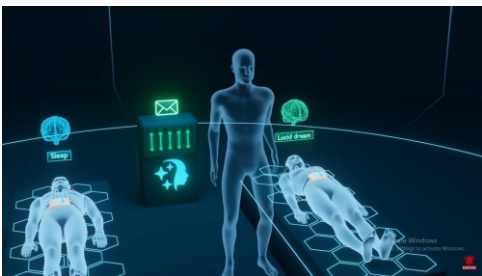
### Tesla's Giga Train: The Future of Eco-Friendly Commuting Begins

Tesla is transforming sustainable transportation with its new Giga Train in Germany. This all-electric service will transport up to 500 passengers between Erkner Station and the Berlin Gigafactory, offering free, eco-friendly commutes for employees and the local community. The train accommodates 120 passengers and bicycles, emphasizing Tesla's commitment to accessible green transport. It will also enhance workforce efficiency, transporting around 4,500 employees across three shifts daily. By utilizing this fully electric train, Tesla aims to reduce carbon dioxide emissions by approximately 50 tons annually, aligning with its mission to promote renewable energy. The Giga Train also strengthens community ties by providing an inclusive transportation option that eases traffic congestion and pollution. As part of a broader vision for global sustainable transport, Tesla plans to expand such initiatives, setting a new standard for environmental responsibility and inspiring other companies to explore greener solutions. The Giga Train represents a significant step forward in sustainable mobility, paving the way for future green transit projects worldwide.



### Dream Messages: A Sci-Fi Reality

Researchers at California-based startup REMspace have achieved a groundbreaking milestone by enabling two individuals to communicate in lucid dreams where one is aware they are dreaming. Using specialized equipment and a unique language called "Remmyo," participants successfully exchanged messages during sleep. This breakthrough opens up exciting possibilities for dream communication with significant implications for both commercial and scientific fields. Two volunteers, monitored remotely, entered lucid dreams in separate locations. The first participant received a random word through earbuds, repeated it in the dream, and the message was recorded. Eight minutes later, the second participant entered a lucid dream, received the message and confirmed it upon waking, marking the first-ever communication exchanged through lucid dreaming. Communicating in dreams seems like science fiction. In future, it will be so common and real-time communication in lucid dreams will become a major industry, rivaling artificial intelligence in its impact. Dream communication technology could



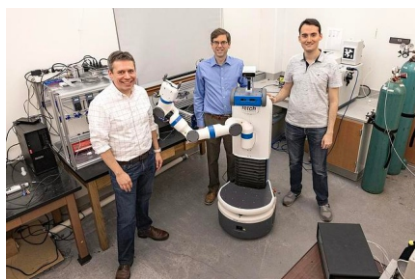
boost creativity and aid therapy for conditions like PTSD, while also enhancing collaboration and personal development. It has the potential to transform our understanding of dreams and their impact on everyday life.

### Robot Chefs Set to Cook Meals in 3-Minutes

Hestia Technology Limited, founded in Hong Kong in 2018 by a chemistry professor, aims to revolutionize the culinary industry with robotic kitchen systems amid rising operational costs. The company plans to automate restaurant operations for greater efficiency while serving traditional Chinese and international cuisine. Its fifth-generation robots manage all cooking tasks, ingredient retrieval, preparation, serving, and cleanup entirely without human intervention. Targeting 30,000 units and \$256 million in revenue, the automated kitchen can prepare over 200 dishes using a larder, conveyor belt, and multicooker. After a dish is selected on a tablet, the robot retrieves ingredients, cooks, plates, and cleans in under 15 seconds, ensuring precise control for consistent quality. With a capacity of 60 dishes per hour, the robots excel during peak times, potentially reducing energy costs by 50% and labor costs by 66%. By minimizing human involvement, Hestia's robots help prevent kitchen injuries, allowing staff to focus on creative roles and enhancing operational efficiency. Hestia Technology's robotic kitchen systems boost efficiency and cut costs by reducing labor and energy expenses ensuring consistent quality, minimized food waste and enhanced safety by limiting human involvement.



### AI and Robotics in Modern Science



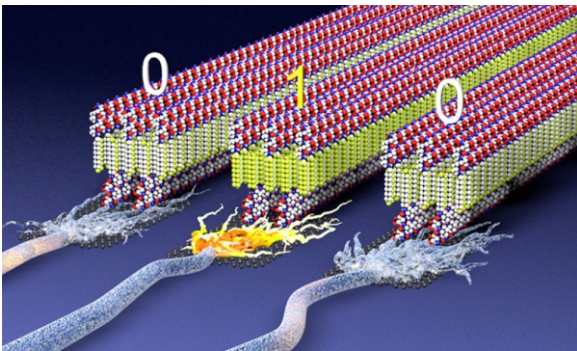
Science laboratories across disciplines, including chemistry, biochemistry and materials science are on the verge of a significant transformation as robotic automation and artificial intelligence (AI) enable faster and more precise experiments, unlocking breakthroughs in fields such as health, energy, and electronics. This insight comes from UNC-Chapel Hill researchers. Currently, developing new molecules, materials, and chemical systems requires extensive human effort, hindering discovery through a labor intensive trial and error approach. Automation presents a solution, allowing robotic systems to conduct experiments continuously without fatigue, thereby significantly accelerating research. These robots perform precise experimental steps with greater consistency and reduce safety risks by managing hazardous substances. By automating routine tasks, scientists can focus on more complex research questions, facilitating quicker advancements. The researchers outline five levels of laboratory automation, emphasizing the need for innovative solutions to foster collaboration between scientists and robots. While automation has the potential to enhance research efficiency and reproducibility, it also necessitates training scientists in advanced technologies to fully realize its benefits. Overall, the integration of robotics and AI is poised to revolutionize laboratories, creating an environment where breakthroughs can occur faster, safer, and more reliably than ever before.

### Photonic Memory Breakthrough for AI

Researchers have developed a groundbreaking method for photonic in-memory computing that successfully integrates non-volatility, multibit storage, high switching speed, low energy consumption and high endurance into a single platform, thereby overcoming significant limitations in photonic memory for AI processing. This innovative approach marks a pivotal advancement in optical computing. By leveraging advanced magneto-optical materials, the researchers achieved enhanced control over light propagation, enabling up to 2.4 billion switching cycles at nanosecond speeds, which represents a remarkable endurance advantage over other non-volatile memory methods. This level of performance not only facilitates faster data processing but also supports a more efficient and scalable architecture for optical computing, which could revolutionize various technological applications. The team is now focused on scaling this technology from individual memory cells to larger arrays capable of managing extensive data processing tasks. They believe that ongoing advancements could further enhance switching efficiency and explore innovative fabrication techniques, significantly expanding the potential of non-reciprocal optical computing across multiple fields, including AI, telecommunications, and beyond. This research underscores the transformative impact of photonic technologies on the future of computing.



### Advancing Sustainable Electroactive Materials



Researchers at Northwestern Engineering have developed an innovative soft electroactive material using peptides and a component of plastics that promises to revolutionize medical devices, wearable technology, and human-computer interfaces. This material consists of tiny, flexible nano-sized ribbons that can store energy and record digital data, combining biocompatibility and sustainability to pave the way for ultralight electronic devices while minimizing environmental impact. The study reveals how these materials

could enable low-power memory chips, sensors, and energy storage solutions, integrating electronic functionality directly into fabrics rather than using bulky external devices. The breakthrough stems from peptide amphiphiles, self-assembling molecules that, when enhanced with polyvinylidene fluoride (PVDF), exhibit stable electroactive properties. This new combination allows the materials to switch polarity at low voltages, which is essential for low-energy electronics and sustainable nanoscale devices. Remarkably, they require the lowest reported energy to change polarity in soft ferroelectrics and are designed to be biodegradable, unlike traditional plastics. The researchers also found that mutations in the peptide sequences can fine-tune the materials' properties, offering a pathway to tailor them for specific applications. Looking ahead, they aim to explore unconventional applications, including biomedical devices and renewable energy processes, leveraging the unique properties of these peptide-based materials. This groundbreaking work not only opens new avenues for advanced technologies but also addresses urgent environmental concerns, marking a significant step toward the future of smart, sustainable electronics.

### High-Yield Water Capture Device for Arid Region

Their five-year project, funded by the Cyrus Tang Foundation, aims to develop low-cost, solar-powered technologies for treating wastewater in rural areas of the U.S. and China. By utilizing biochar, a charcoal-like substance made from agricultural waste, the researchers can effectively purify wastewater, paving the way for a new generation of sustainable water solutions. Targeting communities like Cal-Nev-Ari, which currently struggles with limited and contaminated water sources, the project emphasizes the necessity of treated wastewater. Researchers highlight that many individuals already consume recycled water indirectly through conventional treatment processes. As Lake Mead's levels continue to decline, embracing innovative practices such as wastewater reuse becomes imperative. The research team is dedicated to ensuring that all communities, regardless of size or location, have access to clean water, reinforcing the notion that access to this vital resource is a fundamental right. Through their efforts, they hope to inspire broader acceptance of water reuse and contribute to a more sustainable future.



### Young Innovator in Multan Transforms Plastic Waste into Sustainable Bricks



In the vibrant city of Multan, a young innovator is revolutionizing plastic waste management in Pakistan by converting the country's staggering 3.3 million tonnes of annual plastic waste into durable, eco-friendly bricks. This initiative addresses the critical environmental issue of plastic pollution, which often clogs landfills and contaminates water bodies, by providing a sustainable alternative to traditional building materials. These innovative bricks are not only environmentally friendly but also exceptionally durable, making them a practical choice for

construction. This project highlights the transformative power of recycling, reducing environmental impact while creating economic opportunities. By showcasing how discarded plastic can be repurposed into valuable resources, this initiative sets an inspiring precedent for similar projects across Pakistan and beyond. Ultimately, this young innovator is not only tackling the plastic waste crisis but also paving the way for a more sustainable future, proving that with creativity and commitment, we can turn challenges into opportunities for positive change.

### Switzerland Unveils World's First Solar Panels on Railway Tracks

Switzerland is launching a groundbreaking project to install removable solar panels on active railway tracks, led by the start-up Sun-Ways in collaboration with EPFL. Set to begin in Neuchâtel in 2025, this pilot project aims to generate 16,000 kWh of electricity annually, enough to power local homes. The innovative system utilizes existing railway infrastructure, allowing trains to pass over the panels without disruption. A specialized train from Scheuchzer will install up to 1,000 square





meters of panels daily. The removability of these panels facilitates easy maintenance, addressing a common challenge in integrating solar technology into railway systems. This three-year pilot, funded at CHF585,000 (€623,000), will see 48 panels installed along a 100-meter stretch near Buttes station. While the generated electricity won't directly power the railway, it will contribute to the local grid. With over a million kilometers of railways worldwide, Sun-Ways envisions that up to 50% could adopt this system, potentially generating 1 TWh of solar energy annually in Switzerland alone, covering 2% of the country's energy needs. The company is also exploring larger installations and international opportunities in countries like Spain and South Korea. Despite some skepticism about durability and weather performance, Sun-Ways has implemented solutions such as anti-reflective surfaces and systems to manage snow and ice. This approach could significantly reduce the environmental impact of energy projects by maximizing existing infrastructure, setting a potential model for other nations looking to enhance renewable energy capabilities.

### Panasonic's Aerial Display Spray: A New Era of Visual Technology



Panasonic's "Silky Fine Mist," initially designed to combat Japan's intense summer heat, is now being creatively repurposed for digital displays. This innovative mist is produced using a combination of pressurized water and air, resulting in droplets so fine (ranging from 6 to 10 microns) that they are imperceptible to touch. This quality makes the mist particularly effective for outdoor cooling applications. Since its introduction in 2019, the system has

been widely adopted in train stations, public facilities, and various outdoor venues across Japan. Recently, Panasonic has taken this technology a step further by integrating projection mapping. By projecting images onto the mist, the company has transformed it into a dynamic, transparent display suitable for art installations and digital signage. This combination not only enhances the visual experience but also adds an interactive element that engages viewers. The mist displays were first tested in 2018 and have since been showcased at technology expos, where they have been well-received as a cooler, touchable alternative to traditional projection systems. However, there are some practical considerations: the North American model weighs 420 pounds and consumes 2.4 kilowatts of power, which may limit its portability and ease of setup in various locations. Despite these challenges, the "Silky Fine Mist" offers a fresh and innovative approach to transparent displays, reminiscent of Disneyland's "World of Color," but with the added benefit of interactivity. This makes it a compelling option for enhancing public spaces and creating unique visual experiences that captivate audiences.

### Reimagining CO<sub>2</sub>: A Breakthrough System Converts Emissions into Ethylene

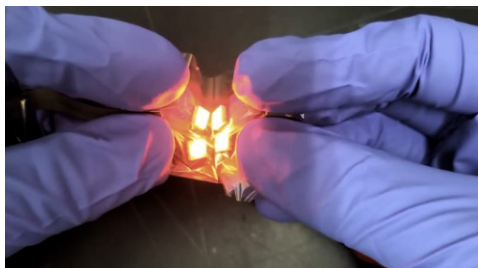
A new system developed at the University of Michigan efficiently converts CO<sub>2</sub> into ethylene, a significant step towards sustainable fuel production. This artificial photosynthesis system excels in efficiency, yield, and durability compared to existing methods, producing ethylene from CO<sub>2</sub> that would otherwise be emitted. Ethylene, primarily produced from oil and gas, is the most widely produced organic compound. The device uses gallium nitride nanowires and copper clusters to convert water and CO<sub>2</sub> into ethylene, utilizing sunlight to generate hydrogen and oxygen. The team achieved a remarkable 61% efficiency in electron contribution to the reaction, with the device



operating for 116 hours without degradation. Looking ahead, the researchers aim to produce other multi-carbon compounds and liquid fuels, which could enable sustainable transportation technologies. This study was supported by the U.S. Army Research Office, and the team is seeking to license the technology through a startup called NX Fuels.

### Printing Flexible Metal Oxide Circuits at Room Temperature

Researchers have developed a groundbreaking method for printing thin metal oxide films at room temperature, resulting in transparent, flexible, and highly conductive circuits. This



innovative technique utilizes liquid metal to create solid oxide films that retain their conductive properties even at elevated temperatures. Traditionally, producing useful metal oxides for electronics has required expensive, high-temperature processes. Metal oxides are crucial in electronics, especially for touchscreens and displays, but most are insulating and difficult to utilize. The new method involves separating metal oxide from the meniscus of liquid metal, which naturally forms an oxide layer when

exposed to air. By using a setup with glass slides to guide the liquid metal, researchers can continuously print metal oxide onto surfaces. This results in a thin film about 4 nanometers thick that adheres strongly to its substrate, essential for reliable circuit printing. The films exhibit surprising properties as they are transparent yet highly conductive. When gold is introduced, it bonds well with the printed oxide, helping maintain conductivity over time by preventing oxidation. The films retain their conductive properties even at high temperatures, with 4-nanometer films effective up to 600 degrees Celsius and 12-nanometer films up to 800 degrees Celsius. Additionally, these metal oxide films can be printed onto flexible substrates, maintaining integrity after being folded 40,000 times. This versatility allows for potential applications in unconventional locations, such as integrating electronics onto leaves. The researchers are looking to collaborate with industry partners to explore further applications for this innovative printing technique.

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## FORTHCOMING TECH EVENTS

### **PAKISTAN**

- 12th International Defence Exhibition and Seminar (IDEAS) November 19-22, 2024  
<https://ideaspakistan.gov.pk/ideas-2024/>
- 3rd International Conference on Contemporary issues in Management and Administrative Sciences November, Lahore College for Women University, Lahore  
<https://lcwu.edu.pk/news-aug2020/4125-3rd-international-conference-on-contemporary-issues-in-management-and-administrative-sciences.html>
- 8th International Conference on Health Professions Education November 5 – 7, The University of Lahore, Lahore  
<https://uol.edu.pk/event/8th-international-conference-on-health-professions-education/>
- 3rd International Conference of Sciences on "Revamped Scientific Outlook of 21st Century, 2024" November 14th, Rawalpindi Women University, Rawalpindi  
<https://conf-fs2023.rwu.edu.pk/>
- 3rd International Nursing Research Conference 2024 November 15 – 16, Liaquat University of Medical & Health Sciences, Jamshoro <https://www.lumhs.edu.pk/nrcon2024/>
- 2nd International Conference & Expo on Plant Sciences, Plant Biodiversity and Food Security in the Wake of Climate Change (PBFS-CC 2024) November 19 – 21, PMAS-Arid Agriculture University, Rawalpindi <https://www.uaar.edu.pk/media/departments/240924.pdf>
- 2nd International Conference on Challenges and Innovation in Medical Lab Science November 20 – 22, The University of Haripur, Haripur  
<https://www.uoh.edu.pk/news-events.php?id=MTg4NA==#gsc.tab=0>
- 3rd International Conference on Emerging Trends in Electrical, Control & Telecommunication Engineering (ETECTE'24) November 26 – 27, The University of Lahore, Lahore  
<https://uol.edu.pk/event/2024-3rd-international-conference-on-emerging-trends-in-electrical-control-and-telecommunication-engineering-etecte24/>
- Role of Artificial Intelligence in Access to Justice in Pakistan: Shaping the Future of Law, Peace, and Equality December 3 – 4, Bahauddin Zakariya University, Multan  
<https://www.iiu.edu.pk/wp-content/uploads/2024/05/iri-international-conference-02052024.pdf>
- Conference for Quality and Innovation in Higher Education (F2F&ODL) CQIHE December 4 – 5, Faisal Mosque Campus, International Islamic University, Islamabad  
<https://www.iiu.edu.pk/seminars-conferences/conference-for-quality-and-innovation-in-higher-education/>
- SAAP IX Biennial Conference, Physiology with Interdisciplinary Integration December 6 – 8, The University of Lahore, Lahore  
<https://uol.edu.pk/event/saap-ix-conference-in-december-2024/>
- 1st Business Research International Conference on Life Sciences

December 19th, University of Veterinary and Animal Sciences, Lahore

<https://uvas.edu.pk/NEWS/2024/August/Call%20for%20Papers.pdf>

- 2nd AUSOM International Research Conference (AIRC) December 12 – 13, Air University, Islamabad  
<https://portals.au.edu.pk/AIRC/>
- 4th International Conference on Distance Education and E-Learning December 6 – 8, International Islamic University, Islamabad  
<https://www.iiu.edu.pk/seminars-conferences/4th-icdeel-2024/>

## **INTERNATIONAL**

- Optical Latin America Optics and Photonics Conference November 10 – 14, Puerto Vallarta, Mexico  
[https://www.optica.org/events/topical\\_meetings/latin\\_america\\_optics\\_and\\_photonics\\_conference/](https://www.optica.org/events/topical_meetings/latin_america_optics_and_photonics_conference/)
- Global Conference on Management and Economics November 15 – 17, Athens, Greece  
<https://www.globalcme.org/>
- International Congress on Engineering and Information November 21 – 23, Taipei, Taiwan  
<https://iceai.org/>
- 4th International Conference on Knowledge Engineering and Knowledge Management November 26 – 28, Amsterdam, Netherlands  
<https://event.cwi.nl/ekaw2024/>
- 3rd Asian Conference on Engineering and Information December 4 – 6, Singapore  
<https://aceai-conf.org/>
- Cruise Ship Interiors Design Expo Europe December 5 – 8, Excel, London  
<https://cruiseshipinteriors-europe.com/>
- 9th International Neonatology Association Conference December 5 – 8, Berlin, Germany  
<https://worldneonatology.com/2024/>
- International Symposium of Robotics Research (ISRR) December 8 – 12, Long Beach, California  
<https://isrr2024.su.domains/>
- 5th International Conference on Computers and Artificial Intelligence Technology (CAIT 2024) December 20 – 22, Zhejiang, China  
<https://www.cait.net/>
- 7th Asia Pacific Information Technology Conference (APIT 2025) January 20 – 22, 2025, Hong Kong  
<https://www.apit.net/>

## **TECH AND TRADE OFFERS**

*Prime Snail MUCUS*

### **About Prime Snail MUCUS**

Ms. Sidra Sajjad's snail firm has focused on snail farming for 3 years, with ambitious future plans. The firm possesses experience in biotechnology and specialized expertise in lyophilization. A commitment to excellence and innovative solutions distinguishes them in the industry. The firm is currently seeking companies interested in incorporating this innovative ingredient into cosmetic formulations in Pakistan and looks forward to partnering to achieve superior results in snail mucus preservation.

Through our inventive technology and extracting method, we lyophilized 1 kg of mucus powder from 100 liters of snail slime liquid with an impressive 99.9% purity level and contained high-content active ingredients with no water, acids, or reagents. Furthermore, we maintained the integrity and effectiveness of snail slime while enhancing its usability, extending its shelf life, or making the material more convenient for transport.

### **Our Services**

- Snail slime for pharmaceuticals
- Snail mucin for cosmetics
- Snail extract powder
- Snail mucin powder

### **Contact Us**

Address:

Khyber Plaza

Office # 303 Near Lari Adda Mansehra, Pakistan.

Phone: [+92 301 9057714](tel:+923019057714)

Email: [hunikhan78785@gmail.com](mailto:hunikhan78785@gmail.com)

Web: <https://primesnailmucus.com/>



## **TECH AND TRADE OFFERS**

*Mumtaz Nazeer Consulting Engineering*

### **About Mumtaz Nazeer Consulting Engineering**

We are committed to engineering excellence and create time and cost-effective solutions for the different challenges our clients face. We achieve this by using innovations and modern technology to get



accurate results, data and relevant analysis to provide innovative, and cost effective, designs and solutions. MNCEPL is committed to give the most efficient Engineering solutions by value addition and becoming part your project team. We provide our clients customized solutions by detailed analysis and design. With a team of dedicated experts, we provide a complete One stop solution for all your project needs.

The principals of the firm are all fully qualified and experienced professional engineers capable of managing small & large complex projects and are registered with the Pakistan Engineering Council. The involvement of the principals in the projects, from inception to completion, ensures that their experience and expertise is channeled to achieve the client's objectives in the most expedient and cost-effective manner.



### **Our Services**

- Architecture
- Construction
- Design briefing
- Concept design and development
- Building regulations
- Construction works

### **Contact Us**

Address:  
206, Universal Complex, Jinnah Road, Quetta  
Phone: [+92 81 2827821](tel:+92812827821)  
Email: [info@mncepl.com](mailto:info@mncepl.com)  
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#### **About PASTIC**

PASTIC serves as a gateway for Scientific & Technological Information for R&D by catering to the information needs of researchers, entrepreneurs, industrialists, educationists, policy makers and planners through anticipatory and responsive information services.

Technology Information Section works exclusively for support and promotion of technological information on trade and industry in the country.

“Technology Roundup” is a news bulletin that provides latest and innovative technology news, and forthcoming events. It also promotes products, technologies and services globally in sectors such as Agro Industry, Bio-Technology, Building Material, Business, Chemicals, Electronics, Energy, Fisheries, Food Processing, Machinery, Packaging, Mining, Pharmaceuticals and Textiles.

Please give us your feedback and address queries to [tis.pastic@gmail.com](mailto:tis.pastic@gmail.com)