

University of Tabriz's Breakthrough Improvement of Brain Pacemaker



WASHINGTON (American Institute of Physics) – Two years ago, a medical professional approached scientists at the University of Tabriz in Iran with an interesting problem: Patients were having headaches after pacemaker implants. Working together to investigate, they began to wonder if the underlying issue is the materials used in the pacemakers.

“Managing external noise that affects patients is crucial,” author Baraa Chasib Mezher said. “For example, a person with a brain pacemaker may experience interference from external electrical fields from phones or the sounds of cars, as well as various electromagnetic forces present in daily life. It is essential to develop novel biomaterials for the outlet gate of brain pacemakers that can effectively handle electrical signals.”

In an article published this week in AIP Advances, Mezher, who is an Iraqi doctoral student studying in Iran, and her colleagues at the Nanostructured and Novel Materials Laboratory at the University of Tabriz created organic materials for brain and heart pacemakers, which rely on uninterrupted signal delivery to be effective.

“We developed nanocomposites that have excellent mechanical properties and can effectively reduce noise,” Mezher said. “For pacemakers, we are interested in understanding how a material absorbs and disperses energy.”

Using a plastic base known as

polypropylene, the researchers added a specially formulated clay called Montmorillonite and different ratios of graphene, one of the strongest lightweight materials. They created five different materials that could be performance-tested.

The authors took detailed measurements of the structure of the composite materials using scanning electron microscopy. Their analysis revealed key characteristics that determine the noise-absorption and signal transmission of the material, including the density and distribution of clay and graphene and the sizes of pores in the material.

“Research groups are actively investigating ways to enhance the performance of pacemakers, and our team focuses specifically on the mechanical, thermal, and other properties of these materials,” Mezher said.

The authors measured the signal-to-noise ratio and how the material performs with different levels of noise. They also tested the impact of the material thickness on performance measures.

“The focus of our ongoing work extends beyond simply identifying biocompatible materials for pacemakers; we aim to improve the connection between the generated signal source and the electrodes,” Mezher said. “Our team is also focused on further developing biomaterials for use within the body, such as materials to enhance the performance of hearing aids.”

Moscow Hosts Persian Poetry Night



MOSCOW (IRNA) -- Russia has hosted a Persian poetry night here to strengthen cultural relations between the two nations.

The Persian poetry night held at the BRICS Plus media center in Moscow featured a screening of a short film about Iran, an educational lecture on literature, music, and Persian translation, along with reading of works by notable Iranian poets, including Saadi.

Iran's cultural attaché to Russia Masoud Ahmadvand emphasized the paramount importance of humanitarian activities in strengthening bilateral cooperation, adding that interaction in cultural areas is central to es-

tablishing partnerships in other fields.

He noted that Iran and Russia have long been expanding their relations within the BRICS framework and that events like Persian poetry nights help foster better understanding between the two nations.

BRICS Plus refers to an extension of the BRICS grouping, originally including five member countries of Brazil, Russia, India, China, and South Africa.

BRICS Plus aims to expand cooperation with additional emerging economies and developing nations that share similar interests and objectives.

Review of Films for Fajr Festival Begins

TEHRAN -- The review process for films submitted to compete in the 43rd Fajr International Film Festival (FIFF) is to officially begin on Thursday, according to Ahad Sadeghi, the director of the festival's secretariat.

Speaking to local media, Sadeghi highlighted the strong response from filmmakers this year, noting that the selection committee will start evaluating the submitted works by the end of this week.

A notable aspect of this year's submissions is the significant presence of debut filmmakers, who account for nearly half of the total entries, iFilm reported.

He further emphasized the high level of participation from the private sector, which submitted over 70 films for consideration. In addition, 22 films were submitted by state-backed production companies.

This year's submissions feature a wide



variety of genres. Of the registered entries, 52 are social dramas, 10 are comedies, five are children's and youth films, and 10 belong to the Sacred Defense (war-themed) genre. The lineup also includes three animated films.

Sadeghi also highlighted the contribution of women in the production of the submitted films. Out of the total entries, two films were directed by female filmmakers, while four female producers played key roles in producing other submitted works.

Looking ahead, Sadeghi stated that, with the selection committee beginning its review this week, the list of films selected for the festival's competition sections is expected to be announced by mid-January.

The 43rd Fajr Film Festival, led by Manouchehr Shahsavari, will take place in February 2025.

Iran Food Festival Held in New Delhi



NEW DELHI (ANI) -- Iran's Ambassador to India Iraj Elahi on Wednesday said that India has all that Iran needs, and hence he plans to work to improve accessibility between both the countries.

Elahi, while attending the Iran Food Festival in the national capital, said that he was working with Indian officials to remove bottlenecks in the transfer of money in trade.

“I have studied the market of India and Irani-

an market. I always mention to my authority, my government that whatever Iran needs is available in India. But we should make it accessible. Accessibility means that we should remove the problem of transfer of money. We need to make different legal bases for our trade. So I am in close contact with the Minister of Trade of India, and I have planned a joint meeting with the Minister of Trade of Iran find a solution for the difficulties which is now and the bottlenecks for trade between two countries,” he told ANI.

The Iran Food Festival kicked off at Eros Hotel, New Delhi, Wednesday presenting a celebration of Persian flavors and culinary traditions.

Elahi added that Iran is facilitating travel with India by exempting Indian passport holders from visa.

“In Iran, we are facilitating and giving more facility to Indian tourists. We have exempted Indian passport holders from visa. Their passport will not be stamped by Iranian authorities. So they can easily visit Iran. And we are also trying to increase the frequency of flight between two countries. I have talked to Air India and other flights. I hope that there will be some progress, and Indians can easily buy a ticket and visit Iran,” he said.

Elahi told ANI that he encouraged Iranians to visit India and see the culture and food. Iran wants to improve the people-to-people ties and trade.

“From Iranian side, I encourage the Iranians to visit India. They should come to India and see the beauty of India. They should come to India to try Indian cuisine. They buy souvenirs from India. So India is not an unknown country for Iran. But people need to come to India by themselves and see the reality of India especially at this moment. India is daily improving, developing and as a new emerging economy we can learn from India, Iranian people can come to India, can set up joint venture in different fields of industries. So we have planned B2B and G2G meeting. In the coming weeks, we will witness more events,” he said.

He said that there are commonalities between food of India and Iran. “Today we hosted different Indian stakeholders, tourism and diplomats in our food festival, Iranian cuisine is similar to Indian cuisine, but just a little bit different... We have different commonalities with Indian, so as you mentioned, people-to-people contacts are important. This is the beginning. We plan to promote tourism between two countries,” he said.

Critics Laud Iranian Film Selected for Academy Awards

TEHRAN -- The selection of “In the Arms of the Tree”, directed by Babak Khajeh-Pasha, as Iran's representative for the 2025 Academy Awards has sparked debate, with critics lauding its artistic merits.

Jennifer Green, a film critic for The Hollywood Reporter, Seattle Times, and San Francisco Chronicle, highlighted the film's aesthetic appeal and symbolic storytelling in an article published by the Alliance of Women Film Journalists.

She praised the film for its “intimate yet universal family story” and called it “a testament to the emergence of a remarkable talent” in reference to director and screenwriter Babak Khajeh-Pasha, iFilm reported.

While Green acknowledged the film's emotional depth and visual beauty, she also pointed out its cautious approach to social commentary.

“Although the film deals with the issue of divorce, it avoids controversial issues and shows strong support for the concept of family,” she noted.

The film's artistic strengths, however, are undeniable. Its portrayal of Iranian nature, with the symbolic use of natural elements that “seem to participate in the lives of the characters and foretell their future,” is widely appreciated.

This connection to nature, paired with the film's exploration of co-existence among Iran's diverse ethnic groups, underscores the di-

rector's subtle yet evocative storytelling approach.

“In the Arms of the Tree” has already made its mark on the international stage. It was screened at the 10th Asian World Film Festival (AWFF) in Los Angeles, where it received the Special Jury Award.

The film has been officially selected as Iran's representative in

the Best International Feature Film category at the 2025 Academy Awards. After reviewing submissions from various countries, the Academy announced a shortlist of 85 films deemed eligible to compete in this category.

The preliminary voting for the 2025 Oscars will take place from December 9 to December 13, with

the final shortlist for the Best International Feature Film, Best Animation, and Best Documentary categories set to be announced on December 17 (corresponding to Azar 27 in the Iranian calendar).

The 97th Academy Awards ceremony will be held on March 2, 2025, at the Dolby Theatre in Hollywood.

Picture of the Day



A census of wildlife in Khuzestan province is being conducted for 15 days and nights with the participation of 70 experts, environmentalists and environmental friendly NGOs.

Photo by Mizan Online