

# India hope for another 'Ro-Ko' show in series decider; focus on Jaiswal, bowlers

**VISAKHAPATNAM:** The spotlight, like most times, will be on Virat Kohli and Rohit Sharma but the pressure would also be on India's younger crop when the home side looks to avoid another embarrassing series loss to South Africa in the must-win third and final ODI here on Saturday.

A Raipur-like fumbling by India will see South Africa bag the ODI series too, closely after their 2-0 triumph in Tests.

Consecutive series defeats is unthinkable for India in the current scenario, particularly when the dressing room is perceived to be pulling in different directions. A victory in this rubber can



quell the chatter around the team for a while, and for that, Kohli and Rohit have to do the heavy lifting once again. Both have been the undisputed masters of the 50-over

half. Now, standing at the door that opens only to the sunset, Kohli and Rohit will want another glorious chapter to be added to the long book of achievements. It's not a mere ambition either.

Kohli has two hundreds and a fifty in his last three innings, while Rohit has a hundred and two fifties in his last four outings. Those numbers tell about their touch, class and hunger even in late 30s, indicating that they can still save the day for the team.

But they would not complain about some meaningful support from the younger batters like it came forth in the last match through Ruturaj Gaikwad, who struck his maiden ODI hundred.

# Minerva Academy to be honoured during Messi's GOAT India Tour

**NEW DELHI:** Minerva Academy FC's youth team that won three titles in Europe earlier this year will be honoured during the Delhi leg of Lionel Messi's 'GOAT India Tour' later this month.

The Under-14/15 squad of 22 players toured Europe in July-August and won three trophies including the Gothis Cup in Sweden, the Dana Cup in Denmark and the Norway Cup in Norway. During Messi's stopover in Delhi, these young players will be honoured in the presence of the global football icon. Following the felicitation ceremony, the children could get to play a special 9-v-9 match with Messi.

Minerva Academy FC is owned and managed by Ranjit Bajaj, who also runs I-League club Delhi FC.

The tournaments in the Scandinavian region are considered among the most prestigious youth football competitions around the world and Minerva Academy FC's team, which remained unbeaten in 26 matches, scored as many as 295 goals while



conceding very few. Konthoujam Yohenba Singh (Best Player, Gothia Cup) and Huidrom Tony (Best Player, Dana Cup) also earned individual honours. The team played against various youth clubs including those from South America and Europe.

Messi will start his tour in Kolkata on December 13, followed by Hyderabad the same evening, before travelling to Mumbai on December 14 and concluding in New Delhi on December 15.

# Senthilkumar, Anahat emerge champions at Squash Indian Tour

**CHENNAI:** National champions Vellavan Senthilkumar and Anahat Singh clinched the men's and women's titles respectively at the Squash Indian Tour 4, which concluded at the Indian Squash Academy, here Friday.

Top seed and World No. 46 Senthilkumar overcame Egypt's Adam Hawal 11-7, 11-9, 9-11, 11-4 to lift the men's crown.

The Chennai player displayed superior control in the closing stages to quell the challenge of the rising Egyptian.

In the women's final, Delhi teenager and World No. 29 Anahat Singh battled past former World No. 10 and veteran compatriot Joshna Chinappa in a pulsating five-game contest, winning 11-8, 11-13, 11-13, 11-6, 11-8.

This was Anahat's second straight victory over the seasoned campaigner after the Daly College Indian Open last month.

"Nice to see rising talent from here," said Joshna, 39, acknowledging Anahat's impressive run.

# Hockey runs in my genes, says India coach Fulton's son Jake

**CHENNAI:** Hockey runs in Jake Fulton's genes, as his father Craig and mother Natalie represented South Africa in the Olympics, and he aspires to emulate the feat but for his adopted country Ireland.

The senior Fulton, currently the chief coach of Indian men's hockey team, had represented South Africa at the 1996 and 2004 Summer Olympics, while Natalie was part of the women's squad at the 2002 World Cup and the 2004 Athens Olympics.

Craig and Natalie were in fact the first married couple to represent South Africa at the same Olympic Games in 2004, and it did not come as a surprise when Jake first picked up the hockey stick at a tender age of two.

"Hockey definitely came from genes. I started hockey at a pretty young age. Father, mother both played hockey their whole lives, so it just had a big impact on me.

That always helped but I love the sport," Jake, who is representing Ireland in the ongoing FIH Junior World Cup, told PTI.

# Sports Ministry partners with Pune-based influencer for 64-day Fit India Campaign

**NEW DELHI:** The Sports Ministry's flagship program, Fit India, has joined hands with Pune-based Simple Steps Fitness for a 64-day run led by ultra-runner and influencer Ashish Kasodekar.

The initiative began on November 24 from the Dong Valley in Arunachal Pradesh, the point where India sees its first sunrise. It is set to conclude on the Republic Day next year at Guhar Moti in Gujarat, the nation's last sunset point.

"The collaboration is expected to strengthen the Fit India mission by making fitness a lifestyle, encourage tree plantation and environmental awareness nationwide, build stronger community bonds through inclusive participation, and inspire a sustainable culture of health, movement, and mindfulness," stated a press release.

Kasodekar, known for his Guinness World Record of running 60 marathons in 60 days and his gruelling



555-km La Ultra feat, is traversing multiple states, from Arunachal Pradesh and Assam to Bihar, as well as from Uttar Pradesh to Madhya Pradesh and Gujarat.

During the 64-day run, Dawn-

# Defending champions Germany beat France to enter semi-final

**CHENNAI:** Seven-time champions Germany had to dig deep to keep their hopes of title defence alive as they progressed into the semifinals of the FIH Men's Junior World Cup, edging out a gutsy France 3-1 in shoot-out after both the teams were locked 2-2 at the end of regulation time here on Friday.

In the 2023 edition, seven-time champions Germany eked out a narrow 2-1 win over France in the final to claim the title.

In the shoot-out, Jonas von Gersum, Justus Warweg and Lukas Kossel, who scored from a penalty stroke, were the goal getters for Germany, while France's lone strike in the shoot-out came from Aristide Michaelis.

All credit goes to German goalie Jasper Ditzer, who produced a superlative show, not just in the shoot-out but all throughout the enthralling contest.

On Friday, it turned out to be a hard-fought contest between the two sides but France had better share of circle penetrations and chances.

France had the first real scoring chance in the form a penalty corner in the 13th minute but the effort was saved by German keeper Ditzer.

But both the teams matched each other stick-for-stick as the deadlock continued after the first 15 minutes.

The second quarter produced an enthralling contest with the tempo and intensity of the game increasing to a different level. If not for German goalkeeper Ditzer, France would have had a sound lead by halftime.

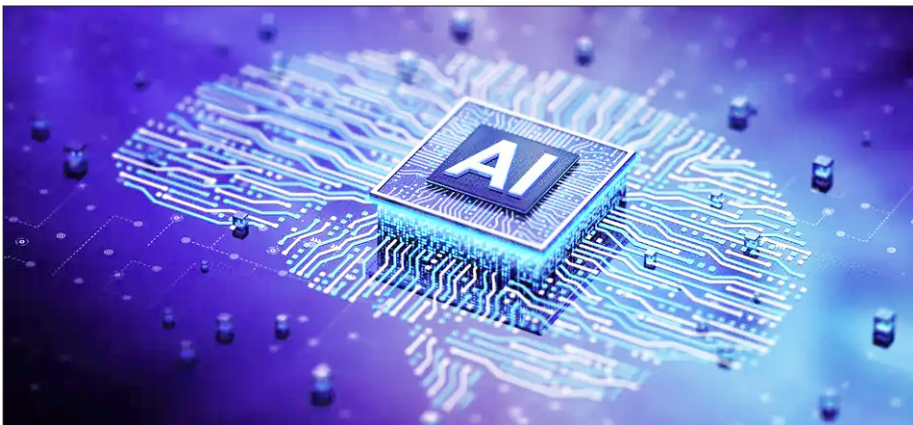
France secured their second penalty corner in the 23rd minute but Ditzer produced another fine save.

The Germans too had their chances but failed in final execution.

But Germany finally broke the shackles against the run of play with a beautiful field goal by Alec von Schwerin in the 30th minute.

France responded back immediately, drawing level seconds later from their third penalty corner through Malo Martinache from a perfectly executed variation.

# AI startup Cohere CEO says US holds edge over China in AI race



**C**anadian tech startup Cohere's CEO Aidan Gomez said on Thursday the U.S. and Canada hold an "incredible position" to partner with economies adopting AI around the world, putting the countries in the lead against China in the global AI race.

Speaking in an interview at the Reuters NEXT conference in New York, Gomez noted China has put out extremely high-performing AI models, narrowing the gap between some of the best closed-source large language models, such as OpenAI's.

But "the thing that actually matters is

who is the primary service provider of this technology - it's not who gets the technology first, but who commercializes it at scale. The U.S. and Canada sit in an incredible position to be the world's partner in adopting this technology," Gomez said.

"I think we will win against China."

The AI arms race between the U.S. and China has heated up this year after Chinese AI startup DeepSeek surged to popularity early in January. Since then, tech giants in China including Alibaba and Baidu have been racing to roll out new models and upgrades to AI products more frequently.

# Scientists Uncover Gel-Like Structures That May Have Sparked Life on Earth

**H**ow did life first take shape? A group of scientists from Japan, Malaysia, the UK, and Germany proposes that the answer may lie in early sticky gels that clung to surfaces long before the earliest cells existed.

Their findings offer a fresh way to think about how life emerged on Earth and also expand how we imagine life might appear on other worlds.

The research was recently published in the journal ChemSystemsChem.

The origin of life has remained one of science's most enduring mysteries.

Although it is impossible to directly observe the earliest moments of life's formation, researchers continue to build realistic scenarios grounded in chemistry, physics, and geology.

"While many theories focus on the function of

biomolecules and biopolymers, our theory instead incorporates the role of gels at the origins of life," said Tony Z. Jia, professor at Hiroshima University and co-lead author of the paper.

In their proposed "prebiotic gel-first" model, the team describes how life may have begun within surface-bound gel matrices—sticky, semi-solid substances that resemble modern microbial biofilms.

These biofilms are thin microbial layers commonly found on rocks, pond surfaces, and even artificial materials.

Drawing from soft-matter chemistry and insights from modern biology, the study argues that such primitive gels could have provided the necessary structure and function for early chemical systems to become increasingly complex, long before the first cells emerged. By trapping

and organizing molecules, prebiotic gels may have overcome key barriers in pre-life chemistry through allowing for molecular concentration, selective retention, and environmental buffering.

Within these gels, early chemical systems might have developed proto-metabolic and self-replicating behaviors, setting the stage for biological evolution.

"This is just one theory among many in the vast landscape of origin-of-life research," said Kuhan Chandru, research scientist at the Space Science Center, National University of Malaysia (UKM) and co-lead author of the study.

"However, since the role of gels has been largely overlooked, we wanted to synthesize scattered studies into a cohesive narrative that puts primitive gels at the forefront of the discussion."

# New Study Challenges Global Health Advice: Reducing Sweetness Won't Curb Cravings

**A**djusting how much sweetness people consume appears to have no effect on how much they enjoy sweet foods, according to a new clinical trial.

Researchers also found that participants who either raised or lowered their intake of sweet-tasting foods over six months showed no meaningful changes in markers related to cardiovascular disease or diabetes risk.

Because of these findings, the team suggests that public health organizations may need to reconsider current recommendations that focus on cutting sweet foods as a strategy for addressing the obesity crisis.

The study was conducted by Wageningen University and Research in the Netherlands and Bournemouth University in the UK, and the results were published in the American Journal of Clinical Nutrition.

"People have a natural love of sweet taste, which has led many organizations, including the World Health Organization, to offer dietary advice on reducing the amount of sweetness in our diets altogether," said Katherine Appleton, Professor in Psychology at Bournemouth University and corresponding author for the study.

"However, our results do not support this advice, which does not consider whether the sweet taste comes from sugar, low-calorie sweeteners, or natural sources," she added.

During the trial, 180 participants were split into three groups. One group consumed a diet containing a high amount of sweet-tasting food, a second group consumed a low amount, and a third consumed an average amount. The sweetness in the foods provided for their diets came from a combination of sugar, natural sweetness, or low-calorie sweeteners.

After one, three, and six months, participants were surveyed on whether their liking and perception of sweet foods had changed. They were also weighed and provided blood and urine samples to measure any changes in their diabetes risk and cardiovascular health.

At the end of the trial, the researchers found no significant differences in any of the measures across the three groups. Participants also reported a spontaneous return to their previous intake of sweet foods after the six months.

Based on their results, the study team are recommending that public health organizations may need to change their current advice on reducing sweet foods to tackle overweight and obesity.

"It's not about eating less sweet food to reduce obesity levels," Professor Appleton said. "The health concerns relate to sugar consumption. Some fast-food items may not taste sweet but can contain high levels of sugar. Similarly, many naturally sweet products, such as fresh fruit and dairy products, can have health benefits."

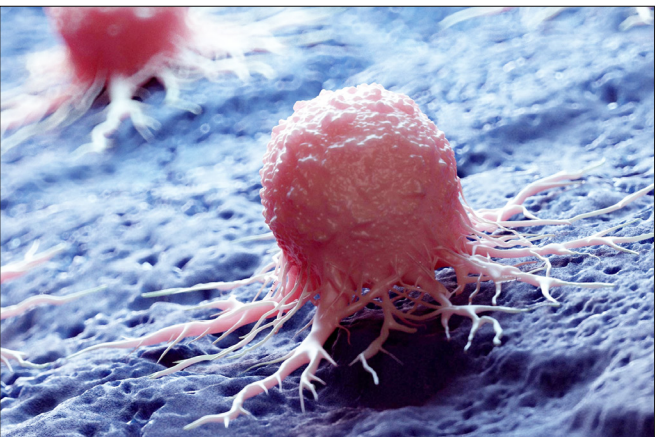
# Tiny Metal Nanodots Obliterate Cancer Cells While Largely Sparing Healthy Tissue

**A**n international team led by RMIT University has developed tiny particles called nanodots, crafted from a metallic compound, that can destroy cancer cells while largely preserving healthy ones.

Although the research is still limited to cell cultures and has not yet been evaluated in animals or humans, the findings suggest a promising new approach for creating cancer treatments that take advantage of vulnerabilities within cancer cells.

These nanodots consist of molybdenum oxide, a material derived from the rare metal molybdenum, which is commonly used in electronics and metal alloys.

According to lead researchers Professor Jian Zhen Ou and Dr. Baoyue Zhang of the School of Engineering, slight adjustments to the particles' chemistry caused them to release reactive oxygen mole-



cules. These unstable oxygen forms can harm vital parts of a cell and initiate cell death.

In laboratory experiments, the nanodots eliminated cervical cancer cells at three times the rate observed in healthy cells over a 24-hour period. Notably, they were effective without the need for light, which is uncommon for technologies of this type. "Cancer

cells already live under high-oxygen stress than healthy ones," Zhang said.

"Our particles push that stress a little further — enough to trigger self-destruction in cancer cells, while healthy cells cope just fine."

The collaboration involved Dr Shwathy Ramesan at The Florey Institute of Neuroscience and Mental Health in

Melbourne and researchers from institutions in China including Southeast University, Hong Kong Baptist University and Xidian University, with support from the ARC Centre of Excellence in Optical Microcombs (COMBS).

"The result was particles that generate oxidative stress selectively in cancer cells under lab conditions," she said.

The team adjusted the recipe of the metal oxide, adding tiny amounts of hydrogen and ammonium.

This fine-tuning changed how the particles handled electrons, helping them produce more of the reactive oxygen molecules that drive cancer cells into apoptosis — the body's natural clean-up process for damaged cells.

In another test, the same particles broke down a blue dye by 90 per cent in just 20 minutes, showing how powerful their reactions can be even in darkness.

# Scientists Crack the Foam Drainage Puzzle After Decades of Mystery

**R**esearchers at Tokyo Metropolitan University have uncovered the solution to a long-standing question about how liquid escapes from foams. Traditional physics models predict that foams must be far taller before any liquid can drain from the bottom, but real-world behavior contradicts those estimates.

By closely examining how foams behave, the team discovered that drainage begins when the pressure is high enough to force bubbles to shift position rather than simply push liquid through a fixed network. Their findings show that the movement of bubbles plays a key role in understanding how soft materials function.

When foam is sprayed onto a surface, droplets often appear below it. This happens because foams consist of tightly packed bubbles separated by thin liquid films, creating a complex network of channels. Liquid can flow through these passages, allowing it either to leave the foam or to draw in additional liquid when new fluid touches the surface. The point at which this occurs, known as the "absorptive limit", has traditionally been linked to "osmotic pressure", which describes the energy change that occurs when bubbles are compressed and their liquid-gas contact areas shift.

Or so it was believed. For many years, scientists have struggled with calculations that predict how tall a foam must be for this limit to take effect.

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