



Rapid Fire Current Affairs

Nanomechanical Testing Technology

An Indian scientist, Dr. Sudharshan Phani has developed a novel method for precise **nanomechanical testing of materials** at extremely small scales .

- The new technique enhances the precision and accuracy of **nanoindentation testing**, allowing for high throughput testing at higher rates.
 - **Nanoindentation** has widespread applications, including measuring semiconductor device strength and understanding material properties in various fields such as [cancer](#)
 - [cell](#) research and [Meteorite](#) formation.
- The approach involved extensive modeling and simulation to understand material responses during indentation tests, leading to tailored improvements in precision and accuracy.
- The new methodology sets the stage for high precision and high accuracy nanoindentation measurements at faster rates, impacting diverse scientific research areas related to material strength measurement.

Read more: [Nanotechnology and Health](#)

Chandrayaan-3 Moon Lander Separates from Propulsion Module



After 34 days on board the [Chandrayaan-3](#) spacecraft, [the propulsion module](#) and the lander module parted ways on 17th August, and have now embarked on their respective journeys.

- [ISRO's](#) Chandrayaan-3 mission involves a lander module (LM), a propulsion module (PM), and a rover for [lunar exploration](#).
- LM and PM were successfully separated, with the LM set to **descend to a lower orbit** through planned deboosting.
- The propulsion module's main role is to transport the lander from [launch vehicle](#) injection to a 100-km orbit around the moon.
- The lander's primary function is soft landing and deploying the rover for [in-situ](#) chemical analysis of the lunar surface.

Read more: <https://www.drishtiias.com/daily-updates/daily-news-analysis/chandrayaan-3-2>

Baghjan Oil Spill

The [National Green Tribunal \(NGT\)](#) ordered the [Assam](#) government to provide interim compensation to victims of **Baghjan oil and gas leak**. This site belongs to **OIL India Ltd** near [Dibru Saikhowa National Park](#).

- NGT-formed **committee led by Justice BP Katakey** found [environmental violations](#), declaring Baghjan oil and gas field illegal.
- [Maguri Motapung Beel](#) (also known as Maguri Motapung Bill, Maguri Bill and Maguri Beel) is a wetland and lake located near to **Dibru-Saikhowa National Park** and Motapung Village of Tinsukia district in Assam.

Read more: [Assam Gas Leak](#)

National Automated Fingerprint Identification System (NAFIS)

National Automated Fingerprint Identification System (NAFIS) of [National Crime Records Bureau \(NCRB\)](#), won the **Gold Award** under the Excellence in Government Process Reengineering for [Digital Transformation Category-1](#) of [Department of Administrative Reforms and Public Grievances \(DARPG\)](#).

- **NAFIS**, a nationwide database managed by NCRB, swiftly stores crime-related fingerprints and assigns a **unique 10-digit National Fingerprint Number (NFN)** to apprehended criminals within 24 hours.
 - NFN remains with the offender for life, connecting various crimes under different FIRs to the same ID.
 - ID comprises state code (first two digits) and sequential number, specific to states.
 - NAFIS swiftly identifies persons of interest, linking their names to warrants, warnings, and related criminal data in police reference systems.
- Operates from New Delhi's **Central Fingerprint Bureau (CFPB)**.
- NAFIS aims to collect fingerprint data of criminals from all Indian states and Union Territories, offering a web-based platform for real-time uploading, tracking, and retrieval of information by law enforcement agencies.

Read more: <https://www.drishtiias.com/printpdf/35-th-inception-day-of-ncrb>

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