

CURRENT AFFAIRS: 08.05.2026

Researchers build synthetic materials that 'learn' to change shape

All life must adapt over time to changing conditions or they could go extinct. On the other hand, most non-living materials do not actively adjust their internal structure in response to conditions once they are made. In a new study in Nature Physics, researchers from Europe have challenged this difference

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Researchers from Europe, in a study published in Nature Physics, have developed **synthetic metamaterials** capable of physically "learning" and changing shape based on external conditions, marking a major breakthrough in adaptive materials and soft robotics.

- **Metamaterials:** They are specially engineered materials whose properties are determined mainly by their physical structure rather than only their chemical composition.
 - Unlike conventional materials, they can exhibit unusual mechanical and physical behaviours not naturally found in ordinary substances.
- **Learning Process:** The metamaterial uses a **hardware-based contrastive learning mechanism**, where each unit compares different physical states and gradually adjusts itself to achieve a target shape.
 - Through repeated environmental feedback, the material can dynamically adjust its bending behaviour to learn, forget, and relearn new shapes.
- **Non-Reciprocity:** The metamaterial exhibits **non-reciprocal behaviour**, meaning it can respond differently depending on the direction of the input.
 - For instance, nudging the material from one side results in a different bending behaviour compared to nudging it from the other side. This allows the material to **learn different ways to attain a final shape without requiring separate training**.
- **Bistable Units:** The metamaterial contains bistable units that can remain in two stable configurations, enabling it to switch, store, and relearn shapes with minimal energy use.

Potential Applications: The technology has promising applications in soft robotics, adaptive prosthetic limbs, intelligent responsive materials, and distributed robotic systems that can autonomously adapt to changing environments.

Limitations: Despite its breakthrough potential, the system currently relies on large hardware components and specialized laboratory setups, limiting immediate real-world deployment and scalability

ILO Complaint by Tea Workers

Tea garden workers union moves ILO seeking restoration of their rights in West Bengal

PBCMS invokes Article 24 jurisdiction of the ILO which allows employers' or workers' organisations to make a representation against any member State, alleging ineffective observance of a ratified Convention

Published - May 02, 2026 10:42 pm IST - KOLKATA

The Paschim Banga Cha Majoor Samity (a non-political trade union) filed a formal representation with the **International Labour Organization (ILO)** under **Article 24 of the ILO Constitution**, citing systemic **state failure** in protecting basic labor rights.

- The complaint alleges the Indian government has failed to uphold ratified Conventions regarding **forced labor**, **equal remuneration**, **non-discrimination**, and the rights of indigenous and tribal populations, among others.

Article 24 of ILO

- **About:** Article 24 of the ILO Constitution is a key procedural mechanism that allows for the **monitoring** and **enforcement** of international labor standards.
- **Function:** Under Article 24, any **industrial association of employers or of workers** (such as a trade union or an employers' federation) has the right to make a "representation" to the ILO's International Labour Office.
- **Eligibility for Filing a Representation:** Eligibility for filing a representation is restricted exclusively to industrial associations, such as **trade unions or employer organizations**; individual citizens and **NGOs** lacking this specific status are ineligible.
- **Scope:** It applies only to **ratified Conventions** and alleges failure to ensure their effective observance within the member state's jurisdiction.
 - **India** has ratified **6** out of the **10** core/fundamental ILO Conventions. These include the **Abolition of Forced Labour Convention, 1957 (No. 105)**, Equal Remuneration Convention, 1951 (No. 100), and **Worst Forms of Child Labour Convention, 1999 (No. 182)**, among others.

UN SPECIALISED AGENCIES

UNSAs are 15 autonomous international organizations working with the UN

ILO

The only tripartite (govt., trade unions, employers) and the 1st affiliated UNSA

- Estd. - 1919 (Treaty of Versailles)
- Headquarters - Geneva, Switzerland
- Functions -
 - » Set labour standards
 - » Develop policies & programmes for promoting decent work for all
- Member States - 187 (India a founding member + permanent member of ILO Governing Body)
- International Labour Conference -
 - » Meets annually in Geneva
 - » aka International Parliament of Labour
- ILO Declaration on Fundamental Principles and Rights at Work 1998 (Principles) -
 - » Freedom of Association and The Right to collective bargaining
 - » Elimination of forced or compulsory labour
 - » Abolition of child labour
 - » Elimination of discrimination in respect of employment and occupation

Cabinet clears amendment to make insult to *Vande Mataram* a punishable offence

On February 6, the Union Ministry of Home Affairs in a set of instructions to States and other government bodies said that all the six stanzas of *Vande Mataram*, that comes to a little over three minutes long, should be sung or played at official events

Updated - May 06, 2026 09:53 am IST - NEW DELHI

The Union Cabinet has recently cleared a proposal to amend the **Prevention of Insults to National Honour Act, 1971**, making any intentional insult or obstruction to the singing of the National Song, *Vande Mataram*, a legally punishable offence.

- **Current Legal Framework:** The **Prevention of Insults to National Honour Act, 1971** strictly penalizes insults or disrespect towards the **National Anthem (*Jana Gana Mana*)**, the **National Flag**, and the **Constitution of India**.
- **Proposed Penalties:** Under the existing **Section 3 of the 1971 Act**, intentionally preventing the singing of the **National Anthem** or causing a disturbance carries a punishment of **imprisonment extending up to three years, a fine, or both**.
 - The amendment will extend this **exact statutory protection to the National Song**.
- **MHA Directives:** In February 2026, the **Ministry of Home Affairs (MHA)** issued instructions mandating that all **six stanzas of *Vande Mataram*** (lasting over three minutes) must be sung or played at official events.
 - The MHA directed that the **National Song should be given precedence over the National Anthem** (written by **Rabindranath Tagore**) when both are featured at the same official event.
 - The Supreme Court held that the MHA guidelines on *Vande Mataram* are purely advisory and carry **no penal consequences for non-compliance**.
- **Historical Context:** *Vande Mataram*, conceptualizing India as a mother goddess, was written by **Bankim Chandra Chattopadhyay** and published in his highly influential Bengali novel **Anandamath** in the early 1880s.

- In **1937**, leaders of the **Indian National Congress (INC)** decided to use only the first two stanzas of the song at their gatherings.
- Following independence, the modern Republic of India officially accorded it the status of the **National Song**, giving it equal historical and cultural footing with the **National Anthem**.

What are the Safeguards to Protect the Honour of the National Anthem?

- **Article 51 (A):**
 - It is part of the **Fundamental duties** of the citizens of India.
 - **Every Indian citizen has a responsibility** to uphold the Constitution's values and institutions, as well as the National Flag and the **National Anthem**.
- **Prevention of Insults to National Honour (PINH) Act, 1971:**
 - The Act stated that **strict punishment** will be meted out for **disrespecting the national anthem and breaking its restrictions**.
 - The accused shall be punished with **imprisonment for up to 3 years or a fine** or both.
- **National Anthem Code of Conduct:**
 - It provides that whenever the Anthem is sung or played, the **audience shall stand to attention**.
 - However, when in the course of a newsreel or documentary the Anthem is played as a part of the film, it is **not expected of the audience to stand**.
 - It also lists the occasions where the short or full versions of the National Anthem will be played.

What are the SC's Views Regarding Honour of the National Anthem?

- **Bijoe Emmanuel & Ors vs State of Kerala & Ors. (1986):**
 - The law around alleged disrespect to the National Anthem was laid down by the **Supreme Court (SC)** in this case.
 - The SC granted protection to 3 children belonging a Christian sect, iterating that forcing them to sing the national anthem was **violative of their fundamental right to freedom of religion (Article 25)**.
 - Their parents pleaded before Kerala HC that the Jehovah's Witnesses sect of Christianity permitted worship of only Jehovah (Hebrew name for God). **Since the anthem is a prayer, they could stand up in respect, but could not sing**.
 - The SC held that standing up respectfully but not singing oneself **neither prevents the singing of the National Anthem nor causes disturbance** to people assembled to sing. Hence, it **does not constitute an offence under PINH Act 1971**.
- **Shyam Narayan Chouksey vs Union of India (2018):**
 - While hearing the same case in 2016, the SC had passed an interim order **mandating all the Indian cinema halls to play the National Anthem** before the beginning of the film and **all those present in the hall are obliged to stand up**.
 - However, in its final judgement on the case in **Jan 2018, the SC modified its order** - "Playing of the National Anthem prior to the screening of feature films in cinema halls is **not mandatory, but optional or directory**".

Cabinet Clears Bill to Expand SC Strength to 38

Cabinet



Cabinet approves increase in the Judge strength of the Supreme Court of India by Four to 37 from 33

Posted On: 05 MAY 2026 7:22PM by PIB Delhi

Why in News?

The Union Cabinet has approved the **Supreme Court (Number of Judges) Amendment Bill, 2026**, to increase the sanctioned strength of the **Supreme Court** from **34 to 38** (including the **Chief Justice of India**).

- This change will be enacted by amending the **Supreme Court (Number of Judges) Act, 1956**, ending a six-year hiatus since the last revision in **2019**.
- The expansion is in response to a backlog of **92,385 cases**, further complicated by the post-pandemic surge in digital **e-filings**.

What is the Process to Increase the Sanctioned Strength of the Supreme Court?

- **Constitutional Foundation:** Under **Article 124(1)** of the Indian Constitution, the Supreme Court originally consisted of a **Chief Justice and 7 other judges**. However, the Constitution explicitly gives **Parliament** the power to increase this number by law.
 - Unlike the **High Courts**, where the **President** can increase the number of judges (under **Article 216**) through executive orders based on workload, the Supreme Court's sanctioned strength can **only be changed through an Act of Parliament**.
- **Legislative Process:** To increase the strength, the following steps are typically followed:
 - **Initiation by CJI:** Usually, the Chief Justice of India (CJI) sends a **proposal** to the **Union Ministry of Law and Justice**, citing reasons like a rising backlog of cases or the need for more Constitution Benches.
 - **Cabinet Approval:** The Law Ministry, after consulting with the **Finance Ministry** (for budgetary implications), places a draft bill before the Union Cabinet.
 - **Introduction of Amendment Bill:** Once the Cabinet approves, the government introduces the **Supreme Court (Number of Judges) Amendment Bill** in Parliament.
 - **Parliamentary Approval:** The bill must be passed by both the **Lok Sabha** and the **Rajya Sabha** by a **simple majority**.
 - **Presidential Assent:** Once passed by both Houses, the bill is sent for the **President's assent**; upon receiving it, the bill becomes an **Act**, and the sanctioned strength is **officially increased**.
- **Implementation:** The President (on the advice of the **Collegium**) can then appoint additional judges up to the **new sanctioned strength**.
- **Evolutionary Trend:** From an original constitutional strength of **1+7 judges**, the court has expanded progressively (e.g., to 10 in 1956, 13 in 1960, 17 in 1977, and 25 in 1986) to match India's growing legal needs.

Concerns

- **Systematic Issues: The Supreme Court (Number of Judges) Amendment Bill, 2026, overlooks** systemic issues like the **appointment process, listing practices, and heavy Special Leave Petitions (SLP)** volumes. Faster case disposal depends entirely on the **Collegium** and Union's speed in filling seats, as historical expansions have consistently been marred by **persistent judicial vacancies**.
- **Law Commission Recommendation:** The present Bill overlooks the recommendations made by the **18th Law Commission** (chaired by Justice A.R. Lakshmanan) in its **229th Report in 2009**, which proposed that simply adding more judges would not resolve the issues of pendency or access to justice.
 - Instead, the Commission recommended establishing a **Constitution Bench** in Delhi and four regional cassation benches in cities like Chennai, Hyderabad, Kolkata, and Mumbai to handle appellate matters from the High Courts.
- **National Court of Appeal:** The Bill fails to address the ongoing concerns raised by a writ petition filed in 2016, which seeks the establishment of a **National Court of Appeal**, highlighting the need for a more accessible and efficient judicial structure

Practice Questions

1. With reference to Metamaterials, consider the following statements:

1. Their properties depend mainly on chemical composition rather than structure.
2. They can exhibit behaviors not naturally found in ordinary materials.
3. Bistable units help them store and relearn shapes.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

2. The “non-reciprocal behaviour” of metamaterials implies:

- A. Equal response irrespective of direction of force
- B. Different responses depending on direction of input
- C. Permanent deformation after force application
- D. Absence of environmental feedback

3. Which one of the following is NOT a potential application of adaptive metamaterials?

- A. Soft robotics
- B. Intelligent prosthetic limbs
- C. Distributed robotic systems
- D. Nuclear fuel enrichment

4. Article 24 of the Constitution of the International Labour Organization (ILO) relates to:

- A. Settlement of interstate disputes
- B. Appointment of ILO judges
- C. Representation regarding non-observance of labour conventions
- D. Membership expansion of ILO

5. Under Article 24 of the ILO Constitution, which entities are eligible to file a representation?

1. Trade unions
2. Employer organizations
3. Individual citizens
4. NGOs without industrial association status

Select the correct answer using the code below:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1, 2 and 4 only
- D. 1, 2, 3 and 4

6. India has ratified how many core/fundamental ILO Conventions?

- A. 4
- B. 5
- C. 6
- D. 10

7. Which of the following are protected under the Prevention of Insults to National Honour Act, 1971?

- 1. National Anthem
- 2. National Flag
- 3. Constitution of India
- 4. National Song

Select the correct answer using the code below:

- A. 1 and 2 only
- B. 1, 2 and 3 only
- C. 2, 3 and 4 only
- D. 1, 2, 3 and 4

8. “Vande Mataram” was originally published in which of the following works?

- A. Gitanjali
- B. Anandamath
- C. Durgeshnandini
- D. Kapalkundala

9. Consider the following statements regarding the National Anthem:

- 1. Respecting the National Anthem is part of Fundamental Duties.
- 2. Article 51A of the Constitution deals with Fundamental Duties.
- 3. The audience must always stand whenever the anthem is played, including documentaries.

Which of the statements given above are correct?

- A. 1 and 2 only
- B. 2 only
- C. 1 and 3 only
- D. 1, 2 and 3

10. In the Bijoe Emmanuel case (1986), the Supreme Court held that:

- A. Singing the National Anthem is compulsory for all citizens
- B. Refusal to sing the anthem amounts to sedition
- C. Standing respectfully without singing does not constitute an offence
- D. Religious freedom does not apply to patriotic duties