

KSG:NEWSPAPER CRUX

9TH MAY, 2021

NEWSPAPER HIGHLIGHT

- **Physicists may have succeeded in paving the way to making the world's smallest lasers, according to University of Oldenburg. They have succeeded in making Bose-Einstein condensates in charge carrier complexes closely linked to light particles. These states live on two dimensional crystals made up of ultrathin semiconductors, just one layer of atoms thick.**
- **A team of scientists from Pennsylvania University in the U.S. has found that discharges that accompany lightning bolts, and which cannot be seen by cameras, produce large amounts of the hydroxyl radical. This serves to break up the green house gas methane in the atmosphere.**
- **Unlike humans, bats perceive the objects around them in terms of time and not distance. They use sonar to send out a sound wave and calculate how much time it takes to get reflected from the object. This calculation requires knowledge of speed of sound, which varies in different mediums. Now, a study in PNAS shows that the knowledge of speed of sound is innate in bats from birth.**
- **University of Amherst researchers have engineered a nanoparticle that has the potential to change the way diseases including cancer are being treated. Published in Angewandte Chemie, the research combines two methods to precisely and effectively deliver drugs to specific cancerous cells. The team uses PACs or protein-antibody conjugates to manage the delivery of the drug to the cancer cell.**
- **Pangolins, despite being listed in Schedule I of Wildlife (Protection) Act, 1972 continue to be the world's most trafficked mammal. The primary demand for its scales in the making of traditional East Asian medicines has led to an estimated illegal trade worth \$2.5 billion every year.**

GLOBAL METHANE ASSESSMENT

1. A report, titled Global Methane Assessment: Benefits and Costs of Mitigating Methane Emissions suggested that the world needs to dramatically cut methane emissions to avoid the worst of climate change. The report was released by the Climate and Clean Air Coalition and the United Nations Environment Programme (UNEP).
2. Carbon dioxide levels have dropped during the Covid-19 pandemic. However, methane in the atmosphere reached record levels last year. This is a cause of concern as it was responsible for about 30% of warming since pre-industrial times.
3. **Reducing Methane Emissions from Major Sources:** Fossil Fuel: **Fossil fuel industry** had the greatest potential for low-cost methane cuts, Waste: **The waste sector** could cut its methane emissions by improving the disposal of sewage around the world.
4. Agriculture-Three behavioural changes — **Reducing food waste and loss, improving livestock management and adopting healthy diets** (vegetarian or with a lower meat and dairy content) — could reduce methane emissions by 65–80 million tonnes per year.

G7 FOREIGN MINISTER'S MEET

1. Foreign Ministers from the Group of Seven (G7) countries (USA, UK, Canada, France, Germany, Italy and Japan) held a meeting in London, UK. The 47th G7 Summit will be held in June 2021. The UK is the host country.
2. Invited Guests: Australia, India, South Korea, South Africa and the Chair (Brunei Darussalam) of the Association of Southeast Asian Nations (ASEAN). Australia, India, South Korea and South Africa will also join the G7 Summit in June.
3. Significance of India's Engagement with G7: It **provides an opportunity for India to develop cordial relations with developed countries. It will boost security cooperation with member countries in Indo-Pacific,** particularly the Indian ocean.

RECENT FINDINGS ABOUT VENUS

1. Scientists have obtained new data about Venus by bouncing radio waves off the planet. The scientists transmitted radio waves toward Venus 21 times from 2006 to 2020 from NASA's Goldstone Antenna in the Mojave Desert of California and studied the radio echo, which provided information on certain planetary traits.
2. Latest Findings: A single Venusian rotation takes 243.0226 Earth days. This means a day lasts longer than a year on Venus, which makes a **complete orbit around the sun in 225 Earth days.**
3. The **Venusian planetary core has a diameter of about 7,000 km,** comparable to Earth's core which is 6,970 km. The Venusian tilt is at about 2.64 degrees. Earth's is about 23.5 degrees.

ANIMAL NEWS

REGULATIONS REVIEW AUTHORITY 2.0

1. The Reserve Bank Of India (RBI) has constituted an Advisory Group to assist the second Regulations Review Authority (RRA 2.0).
2. The RBI has set up the RRA 2.0, initially for a period of one year from 1st May, 2021, with a view to streamline regulations and reduce the compliance burden of regulated entities.
3. **In 1999, the RBI had set up a Regulations Review Authority (RRA) for reviewing the regulations, circulars, reporting systems, based on the feedback from the public, banks, and financial institutions.**