

OCTOBER

Compiled by
POOJA.I.B



1 October

Researchers report the discovery of a novel overlapping gene (OLG) named ORF3d, in the SARS-CoV-2 genome, that may be a factor in the SARS CoV-2 pandemic.

2 October

A rippling graphene-based Brownian ratchet-related energy-harvesting circuit with the potential to deliver "clean, limitless, low-voltage power for small devices" if adequately incorporated into a chip is demonstrated.

5 October

The 2020 Nobel Prize in Medicine is awarded to Harvey J. Alter, Michael Houghton and Charles M. Rice for their work on the hepatitis C virus.

21 October

Scientists analyze the all-cause mortality effect of the first wave of the COVID-19 pandemic for 21 industrialized countries..

26 October

Astronomers report detecting molecular water on the sunlit surface of the Moon outside of the lunar south pole by data from three independent spacecraft and the SOFIA.



27 October

The largest clinical trial – aiming to recruit over 5,000 participants – to investigate effects of Vitamin D supplementation – including with a dosage regime near the RDI – on risk and/or severity of COVID-19 and other acute respiratory infections, CORONAVIT.

31 October

Slovakia starts implementation of a short-period mass-testing programme to test two-thirds of its citizens for COVID-19.

NOVEMBER

Compiled by
RESHMA.G.S



November 4

Astronomers determine that magnetars are a prime source of fast radio bursts.

November 6

Astrophysicists report the first X-ray emissions measurement of baryonic matter of cosmic web filaments.

November 11

Astronomers report newly found evidence for volcanic activity as recently as 53–210 kya on the planet Mars.

November 16

ALMA staff release a corrected version of the data used by other scientists in a study published on 14 September that claimed an apparent detection of phosphine in Venus's atmosphere.

November 25

The Borexino collaboration reports the detection of Solar neutrinos produced by the carbon–nitrogen–oxygen cycle.

November 30

An artificial intelligence company demonstrates a new deep learning-based approach for protein folding, achieving a high protein structure prediction accuracy in tests of the biennial CASP assessment with AlphaFold 2.

DECEMBER

Compiled by
SYAMILI.S



December 2

India successfully test-fired the anti-ship version of the BrahMos supersonic cruise missile from the Andaman and Nicobar Islands territory.

December 3

Karnataka's 1st 11.5-megawatt power plant being set up at Bidadi.

December 6

Pixxel to launch remote-sensing satellite on ISRO rocket.

December 12

ADB launches \$9 bn “APVAX” for Developing Countries

December 13

ISRO to launch communication satellite CMS-01

December 28

Indian Space startup, Skyroot Aerospace successfully test-fire solid-fueled rocket engine



December 30

Union Health Minister Harsh Vardhan launches India's 1st indigenous pneumonia vaccine 'Pneumosil'



Layout & Design



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SCIENCE REMINISCE

A Science Trip down the Memory Lane 2020 28 February 2021

Volume: 2

Bygone Scientific Extravaganza 2020

As 2020 has come to an end, we look back on an era stuffed heavily with ground breaking discoveries. In the past 10 years, scientists around the world had made remarkable progress towards understanding the human body, our planet, and the cosmos that surrounds us. 2020 has been a great year for science with innumerable

scientific discoveries and passing of milestones. We've put our heads together to identify the trends and milestones that we found especially noteworthy, and that we think will set the stage for more amazing discoveries in the decade to come. Through this tabloid, we unveil before you the most significant breakthroughs in 2020.



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JANUARY

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1 January

Demonstration of an artificial intelligence system capable of surpassing human experts in breast cancer detection.

3–5 January

Chinese virologist Zhang Yongzhen sequences the severe acute respiratory syndrome coronavirus 2 genome.

6 January

NASA reports the discovery of TOI 700 d, the first Earth sized exoplanet.

11 January

China's FAST telescope declared as world's largest filled-aperture radio telescope.

15 January

Astronomers report, for the first time, the origin of phosphorus.

16 January

Reported the first direct splitting of one photon into three using spontaneous parametric down-conversion.

17 January

For the first time, scientists report a video of atoms bonding and separating.

20 January

Astronomers, using X-ray reverberation echo mapping techniques, report the mass and spin, for the first time, of a supermassive black hole.

21 January

Development of a single molecule that can absorb sunlight from the entire visible spectrum for the production of the fuel hydrogen.

22 January

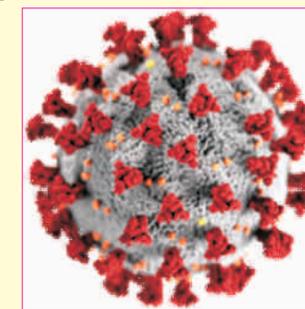
China releases a large amount of data and high-resolution images from the lander and rover of the *Chang'e 4* mission

27 January

Scientists demonstrate a "Trojan horse" designer-nanoparticle that makes blood cells eat away, from the inside out.

31 January

Report overviews of the novel coronavirus *SARS-CoV-2* outbreak, later classified as a pandemic.



February 21

Scientists used AI to discover an antibiotic that may help fight powerful bacteria and drug resistance.



February 26

Paleontologists discovered one-billion-year-old microfossils.

February 11

The bones of a new Tyrannosaurus named “Reaper of Death” were found in Canada.

MARCH

Compiled by
MEGHA.S



March 4

Scientists report to have used CRISPR-Cas9 gene editing inside a human's body for the first time. Scientists report that they have developed a way to 3D bioprint graphene oxide with a protein.

March 5

NASA officially names the originally titled Mars 2020 rover to the newly titled Perseverance rover.

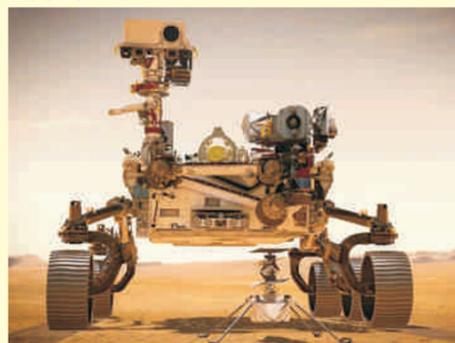
FEBRUARY

Compiled by
AKSHAYA.K



February 1

Solar Orbiter, an attempt by Europe to learn more about the sun, prepared for its launch.



March 6

Scientists show that adding a layer of perovskite crystals on silicon to create a tandem solar cell enhances its performance up to a power conversion efficiency of 26%.

March 14

First confirmed case of the COVID-19 disease in a 55-year-old patient in Hubei province.

March 16

The first phase 1 clinical trial evaluating a potential vaccine to protect against COVID-19 begins at Kaiser Permanente Washington Health Research Institute (KPW HRI) in Seattle.

APRIL
Compiled by **UMALEKSHMI**



6 April

Astronomers announce on "The Astronomer's Telegram", the possible disintegration of Comet C/2019 Y4 (ATLAS).

9 April

Scientists report direct evidence of the use of fiber technology by Neanderthals in southeastern France, 50,000 years ago.

13 April

Astronomers suggest the first comprehensive possible natural way that "Oumuamua, the first known interstellar object detected passing through the Solar System, may have been formed.



15 April

NASA reports the discovery of Kepler-1649c, an exoplanet closer to Earth in size.

16 April

Australia's Morrison Government announces the launch of the research and development phase of its Reef Restoration and Adaptation Program after a two-year feasibility study.

23 April

NASA reports building, in 37 days, a successful COVID 19 ventilator (named VITAL ("Ventilator Intervention Technology Accessible Locally")) which is currently undergoing further testing.



28 April

Astronomers describe a way of detecting exoplanetary life via oxygen on water worlds.

30 April

The first results from ice-monitoring satellite ICESat-2 are published, showing that melting in Antarctica and Greenland has contributed 14 mm (0.55 in) of global sea level rise since 2003.

MAY
Compiled by **GOPIKA.B**



1 May

Scientists report that DNA damage and faulty DNA repair jointly cause mutations such as in cancer genomes.

2 May

A brown bear sighting in Spain's Invernadeiro national park is reported for the first time in 150 years.

4 May

Scientists discovered a microbe that completely protects mosquitoes from contracting malaria.

5 May

A maiden flight of China's most powerful rocket to date, the Long March 5B, occurs.



7 May

Scientists discovered a new black hole that may be the nearest to Earth. This black hole is 1000 light years away.

17 May

The US Air Force has successfully launched its Atlas V rocket, carrying a X-37B space plane for a secretive mission.

27 May

Astronomers report that classical novae explosions are the galactic producers of the element lithium.

30 May

The spaceX launched, making it the first time astronauts are carried to the ISS on a private vehicle.

JUNE
Compiled by **SWATHY.J.P**



02 June

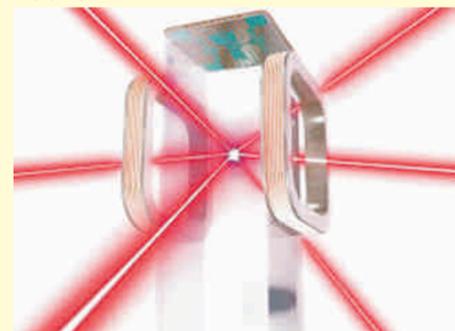
The ATLAS telescope in the University of Hawaii discovered the first known Jupiter Trojan asteroid to have sprouted a comet-like tail.

04 June

An international team of scientists confirm the Earth-sized planet at Proxima Centauri.

06 June

Researchers at the Indian Institute of Technology-Hyderabad developed a low cost and Artificial Intelligence-based test kit for COVID-19.



18 June

CSIR-CDRI candidate drug Umifenovir secures DCGI approval for phase III clinical trial against COVID-19

22 June

Hetero's antiviral drug Covifor received DCGI approval to treat Covid-19 patients.

23 June

ISRO gets Indian patent for liquid cooling and heating garment, LCHG, a close-fitting long garment which covers the wearer's torso as well as limbs, from neck to toe.

24 June

IIT-Bombay has developed a receiver chip -Dhruva. It can be used in smart phones and navigation devices to find locations and routes within the country.

JULY
Compiled by **DIPIN.R**



1 July

Scientists report that quantum vacuum fluctuations can influence the motion of macroscopic, human scale objects.

2 July

Scientists show that adding an organic based ionic solid into Perovskites can result in substantial improvement in solar cell performance and stability.

4 July

Scientists report that COVID-19 may be an airborne disease.

6 July

Researchers at the University of Texas at Austin demonstrate a cobalt free high-energy lithium ion battery.

8 July

Scientists report the development of mobile robot chemists.

15 July

Researchers report the discovery of chemolitho autotrophic bacterial culture that feeds on the metal manganese after performing unrelated experiments.

19 July

The Emirates Mars Mission by the UAE is successfully launched.

22 July

Astronomers publish the first photo of multiple Exoplanets orbiting a Sunlike star

23 July

China's Tianwen-1 Mars rover left Earth to begin its first mission around the planet.



30 July

NASA successfully launches its MARS 2020 rover mission to search for signs of ancient life and collect samples for return to Earth.

AUGUST
Compiled by **AISWARYA.S**



August 2

Scientist report a newly discovered vulnerability in SARC-COV - 2'Spike protein.

August 3

Astronomers reported the detection of a second dust cloud emitted from Betelgeuse.

August 4

Physicists indicates that the Higgs boson decays in to two muons.

August 6

Scientist report the creation of the brightest fluorescent solid optical materials.

August 10

The dwarf planet Ceres is confirmed to be a water rich body.

August 11

Russia's president Vladimir Putin announces that Russia commits the first approval of a Covid-19 vaccine. "Gam - COVID-19 - vac".



August 12

Scientists in the Isle of Wight announced a new species related to the T-rex paleontologists

August 25

Japan successfully tested the flying car (SD-03).

August 26

Scientists report that ionizing radiation from environmental radioactive materials and cosmic rays may substantially limit the coherence times of qubits if they aren't shielded adequately.

SEPTEMBER
Compiled by **AISWARYA.T**



1 September

A new infrared spectroscopy method capable of 80 million spectra per second, nearly 100 times faster than previous techniques, is reported.

2 September

The largest known black hole merger, detected in May 2019, is confirmed.

28 September

Scientists confirm the existence of several large saltwater lakes under the ice in the south polar region of the planet Mars.

30 September

A new graphene-based bolometer, 100,000 times sensitive than previous instruments, is demonstrated.