

CRYPTX

THE RIGHT CLICK

MAY • 2021

TECH • SCIENCE • INNOVATION • PEOPLE

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ONEPLUS RACES TO CLAIM THE CAMERA THRONE

ONEPLUS IS KNOWN FOR MAKING PHONES AS FAST AS A MCLAREN, AND CAMERAS JUST AVERAGE. BUT THIS TIME, THINGS HAVE CHANGED.



OnePlus is considered as one of the few brands that make the finest smartphones for the minimum price, giving them the title - "Flagship Killer". The company began their smartphone dominance when they brought out the OnePlus 1, considered an ultimate device at Rs 9,999 and one of their best. After that, it went on releasing more and more phones with increasing prices. This has slowly led to OnePlus becoming a flagship brand itself since now their competition is not in the low price bracket, but with the Samsungs and the Apples. This has been controversial for quite some time now, but as long as they make smartphones that deserve the price they rock, it's completely fine. Last month, they came up with their latest top-tier device, the OnePlus 9 Pro.

The OnePlus 9 Pro is very competitive with the best phones on the market. However, it will still please only a small group of enthusiasts, who will prefer OnePlus over the other big brands. In India, OnePlus has been gaining popularity, and now more people prefer it over a Samsung semi-flagship (with a plastic back).

The hardware of the device is as elegant as it gets, with a 6.7inch 1440p AMOLED 120Hz display, that bleeds over the edge like the older Samsung models. The back of the phone is also glass which blends with the front through the aluminum rails on the edges. It looks well-balanced and solid. It comes with the Qualcomm Snapdragon 888, with eight gigs of RAM on the 128GB storage. The base price Rs 64,999, but one can add five thousand extra to get the twelve gigs and 256GB variant. Like most phones, 5G had to be there, and it is.

OnePlus's standout spec, Warp charging, is still around. There's a 65W charger in the box, and it can charge the 4500mAh battery at incredible speeds.

But all this is not what makes their new champion different from other phones. It is the cameras that OnePlus is boasting the most since they have collaborated with Hasselblad to improve the camera experience. Hasselblad is a Swedish camera company and has helped OnePlus tune their colors and lent a bit

of their interface to the camera's Pro mode. The question is, was their partnership fruitful?

The OnePlus 9 Pro's image output tends towards blue and lifts shadows to create more lighting. Its photos are more striking but less accurate than that of an iPhone. The camera quality is the best they can offer but still doesn't match up to the iPhone 12 Pro Max or Samsung Galaxy S21 Ultra (which also cost incredibly more). As usual, the camera problems that OnePlus has can easily be fixed with a software update, and they should start rolling out fixes soon. Their main camera is a 48MP Sony sensor with OIS, but it gets overpowered with the Pro mode interface. It is meant for tuning all aspects of the camera to get the shot a professional photographer would appreciate. It also has a 50MP ultrawide sensor - with such a high resolution, ultrawide photos look better than ever. The telephoto camera is 3.3x, and beyond that zoom level, nothing is special. There is also a monochrome camera that only helps the rest of the system.

Software-wise, their Nightscape mode works well for capturing nighttime shots. The portrait mode looks artificial but gets the job done. Unfortunately, the video part is not as good as one would expect. It lets you shoot up to 8K 30 or 4K 120, but neither looks good. It over-processes and oversharpenes everything and even the HDR isn't noticeable.

OnePlus's version of Android, OxygenOS, which remains most people's favorite, has gotten better with version 11. It is similar to Samsung's OneUI this time, trying to shift content down to meet the user's thumb.

All in all, the phone might not be as good as they advertise, but it still sits pretty right with its price. Its cameras do have some shortcomings, but for most people that won't be a problem, since only a small group of people can notice and care about those issues.

Alongside OnePlus 9 Pro, the company also launched the OnePlus 9 and Oneplus 9R, starting at Rs49,999 and Rs39,999 respectively. Both of those smartphones are meant for people who still want the OnePlus experience without hurting their pockets too much.



MUDIT YADAV

ELECTRIC CARS TO TAKE OVER BY 2030

The state legislature has passed trailblazing legislation that they will be phasing out gasoline cars by 2030, and yes that is 5 years sooner than California and everyone else. The new law establishes the most aggressive state goal in the U.S. for moving to an all-electric future and puts Washington five years ahead of California's 2035 target. Although this law depends on the state approving a tax on vehicle miles traveled, as that would help pay for the new transportation infrastructure.

"With the passage of Clean Cars 2030, the end of the era of gasoline-powered cars is in sight," said Matthew Metz, co-executive director of Cultura. "Clean Cars 2030 sets Washington on a nation-leading path consistent with climate science and an auto industry trend toward a fully-electric automotive future. We applaud Rep. Macri, Rep. Alex Ramel (D-Bellingham), and Sen. Marko Liias

(D-Lynnwood) for their leadership on this bill, as well as the many other legislators who made history with their votes."

The legislation must be signed by Democratic Governor Jay Inslee before becoming law. Inslee's office did not immediately respond to a question on whether he would sign it.

California Gov. Gavin Newsom signed an order last September that would ban the sale of new combustion-engine vehicles in the state starting in 2035, also part of a package of policy changes to reduce greenhouse gas emissions. That measure applies to new vehicle sales in the state and doesn't bar Californians from owning gas-powered vehicles. Massachusetts Gov. Charlie Baker unveiled a plan in December to ban new gas-powered cars by 2035 as part of that state's 2050 Decarbonization Roadmap.

TAILOR MADE

Cabinet computers and desktops sometimes win out against portable electronics. Due to the absence of an ideal budget with more than average specifications, a market of customizable computers has opened up to address the demand.

If you observe, not all machines are fully customizable- that said, you cannot add additional storage, drives, adapters, and cooling facilities which you like. Especially in a country where there is a shortage of quality products, and high prices, this is a matter of problem for some of the upper/middle- middle-class groups. Also, as a result of high prices because of imported goods, there is an issue of the lack of choices offered.

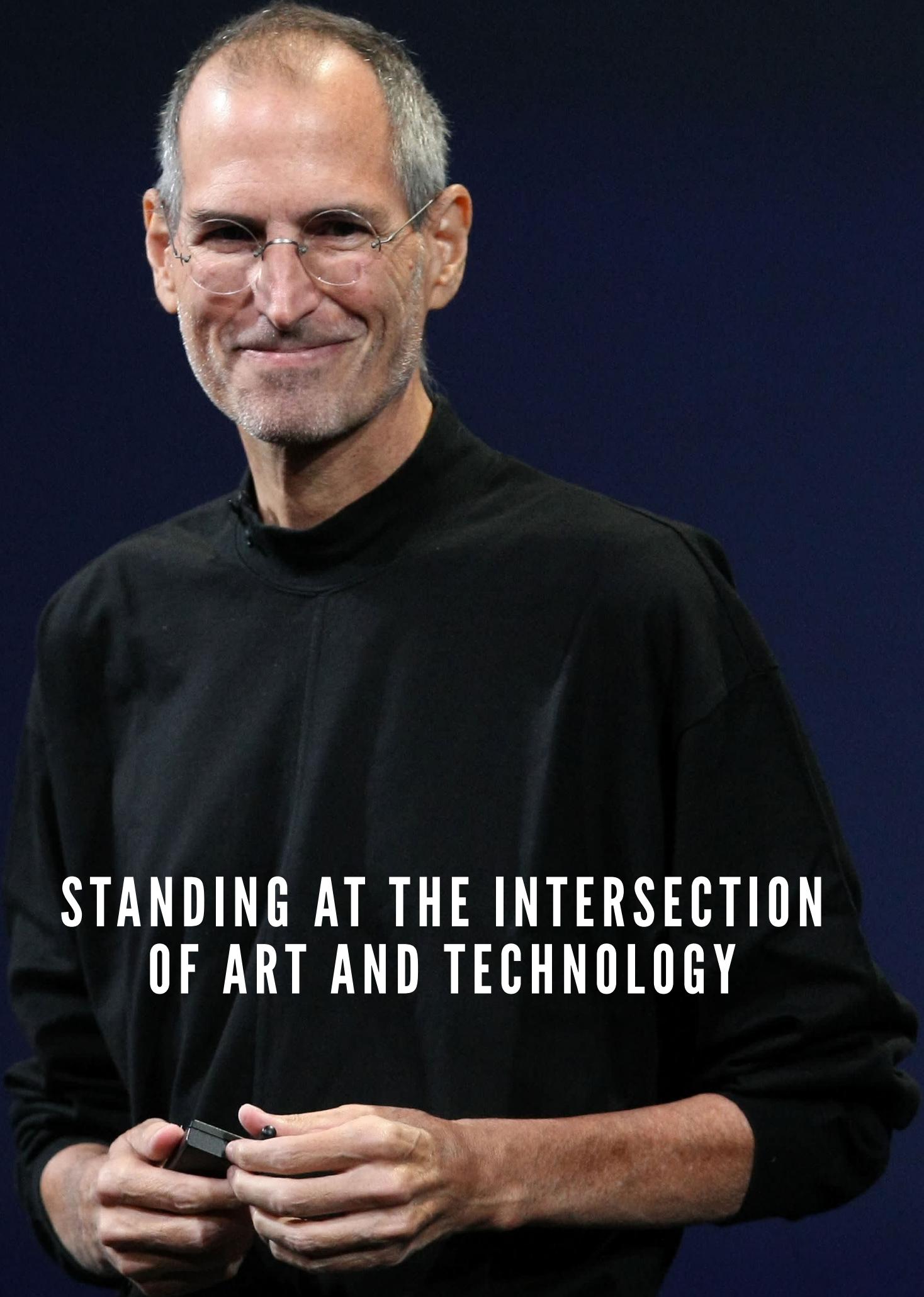
Building a cabinet computer is like completing a Jigsaw Puzzle- you simply have to fit the pieces to their necessary locations, and the parts can be from any brand of your liking- in short, you can do virtually anything you want to. Components normally do not get hot because of the vastness of space offered inside, and so they work effectively- even

upgrading and repairing is not grueling work as compared to opening up a laptop. So, we can conclude that maintenance is a very easy task, and is not at all expensive.

But the evil of cabinets is that they take up a LOT of electricity and space, and produce considerable noise- something which many people will overlook while buying PCs. And also, it requires you to be a tech-savvy and a technical person to find out which part will best suit your computer- for example, you need to know if the processor you are buying is compatible with the motherboard (considering its architecture), the amount of storage to be allotted, disk partitioning, loading the Operating System, BIOS setup, etc. Moreover, as these are normally fitted with components that have varying specifications, you might have to sometimes go through crashes, BSODs (Windows' Blue Screen of Death), and so on. But of course, you can decide what kind will be yours- Business (Reliable and Robust), Gaming (Fast and Furious), Home/Family Computer (Huh, Ordinary), or even a Hackintosh/Illegal Macintosh (Think Different).



S T E V E J O B S



**STANDING AT THE INTERSECTION
OF ART AND TECHNOLOGY**

Steve Paul Jobs, mainly known for being the co-founder of Apple Inc., was born in San Francisco on February 24, 1955 and was adopted soon after. Considered as one of the most prominent entrepreneurs, he made many breakthroughs in the world of computers. He was a business magnate, industrial designer, investor and media proprietor.

He attended Reed College in 1972 and dropped out the same year. When he travelled through India in 1974, he had a dream of becoming a Buddhist, which stayed with him until his death. He met Steve Wozniak in high school with whom he founded Apple in 1976. It is believed that Apple was named "Apple" because Jobs liked apples. Together, the duo built several successful computers and gave the world the Macintosh in 1984. In 1985, Jobs was kicked out of his own company. He took a few of Apple's members and founded two more companies, NeXT and Pixar. In 1997, Apple acquired NeXT and Jobs became the CEO of Apple within a few months. He was largely responsible for reviving Apple, which was at the verge of bankruptcy. The same year, he began the advertising campaign of "Think different" which led to an incredible lineup of products like iMac, iPod, iPad, iPhone etc. He was diagnosed with pancreatic neuroendocrine tumor in 2003 and died on October 5, 2011.

Jobs was a great team leader, and gave his very best to give the world the best products. His revolutionary iPhone was considered ahead of its time. His competition with other brands made him build new things. Apple Inc. still continues to be a tech giant with a net worth of over \$1 trillion. Apple will continue to make innovative products, based on the very ideals of Steve Jobs. In his memory, California's governor has declared October 16 as Steve Jobs Day.

Every year, Apple comes up with something new and innovative, most of the time shattering their opponents, and sometimes, their own products. In the April 20 Virtual Event, Apple did both of those at the same time, announcing new iPads, iMacs, and more. Here is a roundup of all the major announcements.

The New iPad Pros - More Powerful Than Ever:

Apple unveiled its newest iPad Pro tablets, and they're equipped with the M1 chip that's available in the MacBook Air, MacBook Pro, and Mac mini (and the new iMac announced). M1 made the highlight last year, with off-the-charts battery efficiency and performance improvement. Its 'magic' doesn't end there, the M1 is so heat-efficient that Apple ditched the fan on the MacBook Air. It is an ARM-based processor, similar to those of Qualcomm. Given all the capabilities of this processor, it is no question that Apple wants to bring it to as many of their products as they can, to enhance the 'Apple ecosystem'.

Apple claims that the performance of these already winning tablets is now 1500 times the first iPad. It now supports Thunderbolt3, as well as 5G connectivity. The camera is improved as well, with ISP, LIDAR, and a TrueDepth front camera. They also added a new 12MP ultrawide camera, to make capturing group photos a breeze.

The iPads come in two sizes - 11-inch and 12.9-inch. Only the 12.9-inch model has an upgraded display that uses 10,000 Mini LEDs, and Apple calls it the Liquid Retina XDR display, it has around 2500 local dimming zones, enabling a 1,000,000:1 contrast ratio and 1600 nits peak brightness. These are another flavor of LCD panels but still manage to keep up with the OLEDs.

Not only that, but the company also claims that this new device is made entirely out of 100% recycled materials. Apple will start taking orders from 30th April, and they will be available in the second half of May. The 11-inch model starts at Rs 71900, and the 12.9-inch model starts at Rs 99900.

Purple iPhone- Astonishingly Beautiful:

Apple is releasing a new purple iPhone 12 and 12 mini. The new color launches on April 30th. This goes hand-in-hand with the way Apple likes to keep their products relevant, by launching a new color mid-season. It is also a very subtle way of giving a unique identity to every iPhone. Every iPhone has a different combination of design and color, which keeps its product line-up unique and unconfusing. The iPhone 11 Pro had a Matte Midnight Green color, and that color can't be found on any other iPhone. Just like that, the Purple color might be an iPhone 12 exclusive.

Rainbow iMacs to Get You Creating:

People have been speculating about the launch of a new iMac for some time now, especially after how conventional the old iMac looked, along with old hardware and lacking features. Apple debuted a completely redesigned iMac that also has the M1 chip. It's thin, at 11.5mm (but still has a hilariously large chin) and has a 24-inch 4.5K display, a 1080p FaceTime camera, and comes in seven different colors (Blue, Green, Pink, Silver, Yellow, Orange, and Purple). Apple is getting playful with colors.

To go along with the new iMac, Apple has also announced a new Magic Keyboard with Touch ID authentication. This marks the first time that Apple has expanded Touch ID to an external keyboard, it can authenticate for Apple Pay and App Store purchases, and more. The keyboard is also color-matched to the color of the iMac itself, as are the new Magic Mouse and the new Magic Trackpad. Also, they brought back the magnetic power cable - so if you trip over the wire, your iMac isn't tripping with you.

The new iMac is only a replacement for the base old model. The new and better iMac with an even more powerful processor and better front design may be hidden behind veils waiting for Apple to bring it to the public. For creators and students, the iMac is a perfect replacement to a Windows computer, running on the smooth Apple experience

APPLE'S 4/20 LOADED SPRING EVENT WITH PRODUCTS CONTINUING THE M1 SUPREMACY

paired with a lively design that will want you to sit in front of it and get on with your work. You can buy the new iMac in four colors starting at Rs 119900 and in seven colors and better specs starting at Rs 139900.

Keeping Track - AirTags:

Following the purple iPhone announcement, Apple shifted its focus to the Find My application and finally introduced its AirTag item tracker, which has been rumored for over two years at this point.

AirTags can be attached to any item to track it using the Find My app. For example, they can be attached to your backpack, to keys, to your wallet, or even your pet's collar. The app can be used to track objects that are missing or have been lost. The user needs at least iOS 14.5 on their device to use this tracker. When in Bluetooth range, the app can tell the user exactly where the AirTag is by using directions. In a more practical scenario, wherein the tracker is lost, the user can mark it as 'lost'. The tracker will then use info from devices of users who pass by the lost tracker to update its location and help its way back home. It has very strong integration with the ecosystem, allowing strangers to get the contact information of the person who is looking for the tracker too if provided.

The company touts that AirTags have a "lightweight design," and there are two key factors to this: water resistance and a user-replaceable battery. The AirTags are rated for IP67 water and dust resistance. The product offers "over a year's worth of battery life with everyday use" and features a removable cover that makes it easy for users to replace the battery. The battery inside is a standard coin cell battery. Surprisingly, it's great that Apple went with the replaceable battery route. (It's almost impossible to replace the battery on an iPhone or MacBook.) It starts at Rs 3190 for one and Rs 10900 for a four-pack.

Apple TV 4K Is Getting the A12 Bionic Chip:

Apple revealed a new Apple TV 4K, which comes equipped with the same A12 Bionic chip found on the iPhone XS, XS Max, and XR, enabling it to now play HDR and high frame rate videos. It will start at Rs 18900 for 32GB. The new Siri Remote features a silver design with a click wheel alongside a power button for the first time. There is also a back button replacing the old menu button.





Quantum
plottors



EFFECT ON THE ELECTRICAL CONDUCTIVITY OF GRAPHITE DUE TO ELECTRON AND POSITRON BEAMS BOMBARDMENT

Quantum-plators, a team of seven, submitted a research proposal as their entry for Beamline For Schools 2021 organised by CERN. The idea was to propose a scientific experiment we would like to perform at DESY, Germany.

INTRODUCTION

Electron Beam Surface Treatment is one of the most efficient methods to form hardened alloys, new materials. Approaches in the past have mainly focussed on using laser beams and laser ion beams. We hope to find out if bombarding an electron beam on an element causes any variation in its electrical conductivity.

We will then find out the difference in the result when using a positron beam instead. We also see a potential industrial application to increase the electrical conductivity and hardness of materials using an electron beam. In semiconductors, the electrical properties are usually controlled by the composition and structure of the outermost micron of material.

RESEARCH QUESTION

TO CALCULATE THE CHANGE IN ELECTRICAL CONDUCTIVITY AFTER COLLIDING IT WITH AN ELECTRON AND POSITRON BEAM.

THEORY

Energy can be deposited in the near-surface region of materials using pulsed electron beams. The kinetic energy of the electron beam is deposited into the target material and increases the energy of electrons in the material to a higher state. The electrons then return to the ground state by radiating heat (absorbed by the material in the form of lattice) and x rays, heat radiation, reflected electrons and secondary electrons. Due to the heat absorbed as lattice, the material undergoes structural and compositional changes.

[1]

Bethe-Bloch formula

$$-\frac{dE}{dx} = \frac{4\pi q_e^4 z^2}{m_0 v^2} \cdot NZ \cdot \left[\ln \frac{2m_0 v^2}{I} - \ln(1 - \beta^2) - \beta^2 \right]$$

z, v : atomic number and velocity of projectile

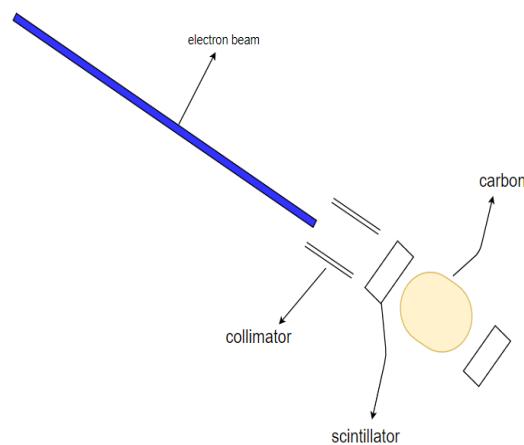
N, Z : particle density and atomic number of absorber

Since electrical conductivity is defined as the ability of the electrons to move within the lattice of the material, theoretically, there should be a difference in the electrical conductivity of the target material. The target material must be kept in a vacuum to minimise the dissipation of the electron beam. The energy lost on contact can be calculated using the Beth-Bloch formula [1]. The heated metal will subsequently be cooled using an ice bath and be tested for its electrical conductivity using a Sigmascope-10 device. The results will be compared, and dependence will be established between the electrical conductivity and energy of the electron beam.

EXPERIMENTAL SETUP

We will first record the conductivity of the graphite body using Sigmascope-10 before its collision with the electron beam and then use an electron beam of 500 MeV, which will pass through the collimator, which will subsequently target the beam towards the graphite body. The scintillator in front of the graphite body will measure the energy of the electron beam before its collision with the graphite body. The same experiment will be repeated

using a positron beam. After the collision, we will measure the electrical conductivity of the graphite body using Sigmascope-10 by placing it on the graphite body. After recording these values, we will repeat the experiment using a new graphite body and electron and positron beams of higher energy (1 GeV) and record the change in conductivity of the graphite body. After recording these values, we will plot a graph showing the relation between the incident energy of the electron beam and a graph for the relation between the incident energy and the positron beam. We will compare the two relations and find out if there is a difference between the two.



EQUIPMENTS

Collimators

Scintillators

Graphite

Electron and positron beam

Sigmascope-10 to measure electrical conductivity





"The Farmhouse", by Precht

ARCHITECT CHRIS PRECHT CRITICIZES THE IMPACT OF NFTS ON THE ENVIRONMENT

NFT - NON FUNGIBLE TOKEN

Architect Chris Precht has abandoned plans to sell digital artworks backed by NFTs due to the environmental impact of mining the digital tokens. In a video posted on his Instagram account, Precht said that non-fungible tokens offered creatives an exciting opportunity to make money. But he said the carbon emissions associated with creating the tokens was "horrible".

"This leaves such an ecological guilt for me that this time, I have to say no to that," he added.

Ethereum cryptocurrency said to have "ludicrously high" carbon impact.

Precht based his calculations on a controversial blog post by computational artist Memo Akten, who investigated the "ludicrously high" carbon impact of Ethereum, a cryptocurrency that is commonly used to buy and sell NFTs. "While not as bad as Bitcoin, a single Ethereum (ETH) transaction is estimated to have a footprint on average of around 35 kWh," Akten wrote. "To put that into perspective, this is roughly equivalent to an EU resident's electric power consumption for four days." The hype surrounding NFTs has led to rising concern over their environmental impact. Cryptocurrencies require enormous amounts of energy as each coin needs to be "mined" by computers

solving complex problems.

Another article posted on Quartz calculated that: "Over its lifecycle, the average NFT will accrue a stunning footprint of 211 kilograms of CO₂, equivalent to driving 513 miles in a typical US gasoline-powered car." NFTs could allow studios to sell digital versions of their designs and use the money to build real versions, he said.

"In the long run, it also widens the playground immensely with the designing of the digital world," he added. "I could imagine a scenario where Bjarke [Ingels] could charge more for a building in the virtual than in the real world."

Digital artworks are a statement about the pandemic.

Precht's digital artworks feature examples of his architectural projects repeated and turned into spiky spheres reminiscent of the coronavirus virion. "Those three pieces are a statement about the current times we're living in, how the pandemic shaped the different world and about the tools that architects have to react to that," he said.

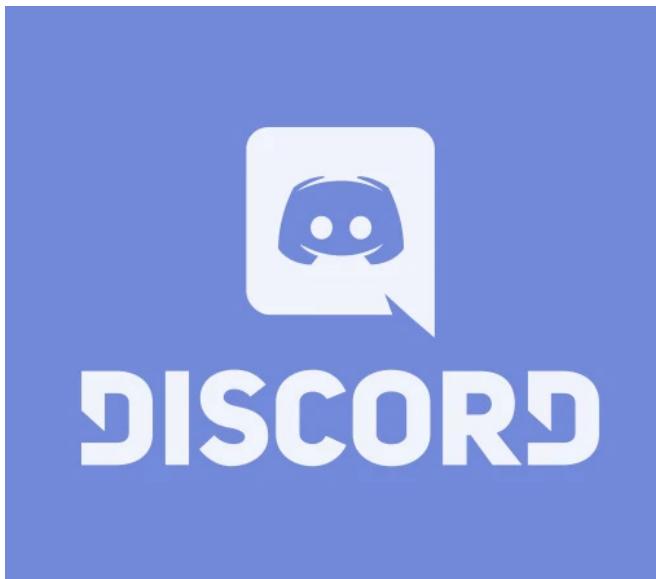
"So that means more balconies or terraces, for example; better urban places and better urban plazas for the cities, and how we can revive the countryside, living close to nature, understanding our environment, and maybe de-densifying cities."

WHICH STORE ARE YOU PUBLISHING YOUR NEXT APP ON?

Who does not want to make a good app and publish it? But now, the question comes to your mind - "Whether to design the build first for Android or iOS?". Both the companies, Google and Apple have made their best attempts to draw the attention of the developers to make their platform more popular with apps. So, today I will be clearing your doubts on this question. (There is a bonus at the end for game developers!)

First, let's look at the Google Play Store. Here is some info about how to upload an app or a game to the Google Play Store. First, you need to create a Play console account and for that, you must be more than 18 years old. Then, link your Developer Account with Google Wallet Merchant Account, create your application and upload App Bundles or APK To Google Play. And there you go, your app is now available to be downloaded on billions of smartphones. You can also add some premium perks to your app/game and enjoy the monetary benefits.....will you? Actually, it's quite hard to get the app visible to the audience at first because there are verified developing companies and developers who always steal the spotlight. You will need to buy an ad slot in Google Play which will be kind of expensive. There are around 2 billion android users and 26.4 million android developers. So, there is a big audience and a lot of competition. Now, you can continue to publish some apps regularly and collectively invest the profit you earned in one single app which you think deserves the presence in the audience. But, what if I told you that there are other big options out there. Yes, you know that it's Apple. The App Store is similar to the Play Store but has fewer users as well as developers. On the flip side, **App Store is known for more profits for developers.** So, I would suggest you first upload your app on the App Store, if it becomes successful then you can go and release an android version. But, if you are working on a big project with a big team and want a bigger audience to experience something cool, then look forward to Google.

Bonus - If you are a game developer and are looking for more alternatives to upload PC games, then I would personally prefer Steam and itch.io to reach the audience which is more into gaming and will help you improve your game by finding bugs and suggestions.



APP OF THE MONTH

Discord is a VoIP, instant messaging and digital distribution platform designed for creating communities. Users communicate with voice calls, video calls, text messaging, media and files in private chats or as part of communities called "servers". One of the main things that makes Discord different from other distribution platforms such as Whatsapp, Telegram, is that it's not peer to peer. Discord runs on Windows, macOS, Android, iOS, iPadOS, Linux, and in web browsers. As of December 2020, the service has over 140 million monthly active users. Starting in June 2020, Discord announced it was shifting focus away from video gaming specificity to a more all-purpose communication and chat client for all functions, revealing its new slogan "Your place to talk" and a revised website.

GAME OF THE MONTH

Genshin Impact is an action role-playing game developed and published by miHoYo. The game features an open-world environment and an action-based battle system with animated characters. It is a "Magical World of Adventure". It has been released on PS4, PS5, Nintendo Switch, iOS, Android, and Windows. It is full of loads of when - especially when you play it with your friends on Discord. But I think upon playing it, many realised there was far more to Genshin Impact, and its popularity continued to thrive due to its gorgeous production values, wealth of content, regular updates, and decent monetisation system. And best of all - It's free on every platform! The only limitation is its requirements - you will need some powerful specs to enjoy the game to the fullest.



CONTROVERSY OF THE MONTH

It's Apple's favorite pastime to not pass time. They are known for not taking "tracking features" of notorious apps lightly, and their new feature aims to protect their users' privacy even more. Owners of iPhones the world over are now seeing in-app prompts asking if they are OK being "tracked". Users that click "Ask App Not to Track" deprive developers of seeing their IDFA — identifier for advertisers — a string of numbers associated with each iPhone that build user profiles as they move from app to app. This move is already being hated by Facebook, which has already published newspaper ads to oppose Apple. It will be interesting to see how this battle of privacy plays out.

THE ART OF MINECRAFT SPEEDRUNNING



A speedrun is a play-through, or a recording thereof, of a whole video game or a selected part of it (such as a single level), performed to complete it as fast as possible and the act of doing a speedrun is called speedrunning. In games such as GTA, Mario, etc, the game world is static; meaning that when we play the game, the world in which we are playing is going to be the same no matter what. Speedrunning in these types of games is about how well one can complete a level/game, which is always the same. This is not the case with Minecraft. The world generation in Minecraft is based on the concepts of "seeds". A world always has a unique seed associated with it and there are 18,446,744,073,709,551,616 of them; this number is so large that one will spend their entire lifetime before counting to this number. In Minecraft, speed runs are broadly divided into 2 categories, "Random Seed" and "Set Seed". As their names suggest, a random seed run is one where the player needs to create a world to speedrun without specifying a seed which results in a random world creation; in set seed runs the world is created with a pre-specified seed, meaning that the strats (strategies) used will be the same every time.

Let's take a look at a subdivision of random seed runs, RSG or Random Seed Glitchless, as it is the most popular way of speedrunning the game. Before going any further we need to discuss how Minecraft is usually speedran. The 3 main steps are, getting blaze powder and ender pearls, creating ender eyes from them to light up the end portal, going to the end dimension through the portal to kill the ender dragon. The strategies differ from version to version so RSG runs are again divided into 3 categories, Pre 1.9, 1.9-1.15, and 1.16+ (all of them indicating the version of the game). Most of the modern runs are done in the 1.16+ category as it is the newest version of the game which helps the player to use more sophisticated strats resulting in lower completion times. Minecraft speedrunning was popularized by the YouTuber Dream, who is also an ex-speedrunner. He held the world records for 1.14 and 1.15 for some time. Speedruns were usually more than 20min long before 2019 and in pre 1.15 versions. The 1.16 "Nether Update" completely changed the landscape of Minecraft speedrunning. In 1.14 - 1.15 runs, the process of getting ender pearls was pretty straight forward, leveling up a cleric villager up to master to get the pearl trades, and in pre 1.14 runs going an open space (usually a desert) and killing endermen was the best strat, both of the methods were extremely time consuming; the addition of bastions and piglins in the nether update made this process a whole lot faster.

To understand the effect of the nether update on Minecraft speedrunning, let's take a look at 2 of the most used 1.16+ strategies; the ocean and village routes. Both of the strats are pretty similar to each other but they differ in one major way, the source of iron ingots. Iron ingots are the most important items used in the initial phase of a speedrun as they are used to craft three essential things; a bucket (used to make a nether portal from an underwater or normal lava pool), a "flint, and steel" (to light up the portal) and an iron pickaxe. In ocean strats, shipwrecks are used as the main source of iron, and underwater lava pools (found in underwater ravines) as the place to build the nether portal. On the village side of things, naturally spawned iron golems and village chests (there is also a small chance of getting iron pickaxes from them), beds are also broken and taken from the houses in the village. An alternative way of getting an iron bucket in the village strat is to trade with a fisherman, this method is usually used during a shortage of iron. After this step, the process is pretty similar, go to the nether, find a bastion, break the gold blocks using the iron pickaxe we made earlier in the bastion to trade with the piglins to ender pearls (and make beds using strings if used the ocean strat), find a nether fortress, get blaze rods and then make ender eyes. Now we need to "blind travel". To understand what it is, we need to understand stronghold generation. Strongholds generate in several rings in the overworld, the three nearest are located at around 1,280 – 2,816 so traveling to them takes up a bit of time but a single block in the nether corresponds to 8 blocks in the overworld so traveling to around 220 in the x and z coordinates there places us in the first stronghold ring. Building a nether portal there teleports us in the overworld near to the portal. Triangulation is done using 3-4 ender eyes to find where the portal room is. After finding the portal and going inside the end dimension, we reach the final point of the run, killing the dragon. The beds are of use now. 2 obsidian (or crying obsidian) are placed on top of the exit portal and when the dragon flies down, beds are placed and clicked on causing them to explode in a process known as the "one cycle". The explosion causes the dragon to lose health, ultimately killing it.

The current verified RSG 1.16+ world record holder is TheeSizzler with an in-game time of 11m 7s and the current non-verified (at the time of writing) RSG 1.16+ world record holder is Brentilda with an in-game time of 9m 38s. So ladies and gentlemen, the average time of a Minecraft speedrun went down from the duration of a full-length documentary to being shorter than a Spongebob episode.



Facebook

Millions of people's phone numbers were scraped from Facebook's database in a breach, thanks to a loophole discovered in 2019. The vulnerability was fixed in August 2019. Personal details of over 533 million Facebook users from 106 countries were found, including over 32 million records for US users, 11 million for UK users, and 6 million for Indian users. Their phone numbers, Facebook IDs, full names, addresses, birthdates, profiles, and, in some cases, email addresses. Now, the entire dataset has been posted on the hacking forum for free, making it widely available to anyone with rudimentary data skills (I have checked this). If you would like to check if you were affected by the attack, I suggest checking out <https://haveibeenpwned.com/Mobikwik>

Important information of 9.9 crore Mobikwik users has been leaked online, which the digital payments company has denied. The disclosure about the data leak was made by cybersecurity analyst Rajashekhar Rajaharia who has also written to the Reserve Bank of India, Indian computer emergency response team, PCI Standards, and payment technology firms, etc. The recent data leak is serious as it is said to have exposed important user information including mobile phone numbers, bank account details, email, and even credit card numbers of 9.9 crore Mobikwik users. The screenshots of the Mobikwik breach were posted on Twitter by a French security researcher who goes by the name Elliot Alderson. He called it the "largest KYC data leak in history". Even though Mobikwik has denied this leak, there are several reasons to believe

that a breach was made. First, a group of hackers by the name of Jordandaven emailed the link of the database to PTI. They shared the data of Mobikwik founder Bipin Preet Singh and Mobikwik CEO Upasana Taku from the database. This data breach is claimed to have been done by a group of hackers called the 'Ninja_Storm' who have been selling the 'leaked' data online since 26 March. The hackers have maintained that they only want to get money from the company and do not plan to use it otherwise. The data had been sold recently (according to some hacker groups for over 1.5 bitcoins which is Rs 63 lakhs) This comes after Mobikwik on Tuesday, 30 March, said they would initiate a forensic data security audit. "The company is closely working with requisite authorities on this matter, and considering the seriousness of the allegations will get a third party to conduct a forensic data security audit".

Big Basket

BigBasket database of over 20 million customers has allegedly been leaked on the dark Web, months after the online grocery delivery platform confirmed a data breach. The alleged database includes the email addresses, phone numbers, and hashed passwords of the affected customers. The data also allegedly carries physical addresses and the date of birth of BigBasket users. Although the database that is available for free access on the dark Web includes user passwords in an encrypted form, another hacker has claimed to have decrypted some of the leaked passwords. The alleged BigBasket database has been put on the dark Web by a hacker group infamously known as ShinyHunters.

JASRAJ JOHAL



STAR RS PUPPIS

THE BRIGHT STAR RS PUPPIS IS SWADDLED IN A COCOON OF REFLECTIVE DUST ILLUMINATED BY THE GLITTERING STAR. THE STAR IS 10 TIMES MORE MASSIVE THAN OUR SUN AND IS 200 TIMES LARGER.



JEEV JATIN SINGH

THE QUANTUM INTERNET

Quantum Computing has taken the I.T industry by storm. This new field of computing has fascinated experts and enthusiasts alike. But that was just the beginning. Researchers are now working on a quantum internet. A quantum internet will revolutionize communication technology by exploiting quantum mechanical phenomena such as entanglement, which affects multiple qubits simultaneously. Entanglement allows two quantum objects (qubits in this case) to be somehow linked to each other. If a change occurs to one entangled qubit, it will be reflected in the other entangled qubit as well.

One of the shortcomings of Quantum computers is their susceptibility to error, much more so than their classical counterparts. Their ability to transmit data processed by quantum computers is limited by the hardware (supercooled magnets and fiber optics cable). A quantum internet would help overcome these shortcomings.

One of the most significant applications of a quantum internet would be establishing a secure communication channel. Recently, there has been a lot of buzz regarding the threat quantum

computers pose to current standards of encryption. Researchers have suggested classical means, but it turns out that we can fight quantum with quantum. The standard method of establishing a secure quantum communication channel would be entangling a pair of qubits. It would be physically impossible for another qubit to take part in the same entanglement, hence ensuring the channel's security. So even if a hacker buys a quantum computer, he won't be able to listen in to the data being transmitted. Establishing a quantum internet would also enable remote access of quantum computers through the cloud.

Currently, a quantum internet can be established over very short distances. Operating over long distances, however, is a problem. The most efficient solution is utilizing entanglement with "quantum repeaters", which essentially increase the range.

Although a fully-fledged quantum internet is far from being completed, significant progress has been made in recent years. In 2020, the U.S Department of Energy released a blueprint outlining their plan to introduce quantum internet in the USA. Researchers in DEFT, Netherlands, established the first entanglement-based quantum network. It will be some time before a fully developed quantum internet is established, much less open to the public. Rest assured; you won't be streaming Netflix on the quantum internet anytime soon.

"THE WEB IS NOW PHILOSOPHICAL ENGINEERING.
PHYSICS AND THE WEB
ARE BOTH ABOUT THE RELATIONSHIP BETWEEN THE
SMALL AND THE LARGE."

TIM BERNERS-LEE

COVID RESOURCES

COVID.ARMY

<https://covid.army/jaipur>

COVID19INDIA

<https://www.covid19india.org/resources>

"The objective of this page is to help people gain access to vital resources by sharing information only. We will not be responsible for the actions you take using the information on this page. We are just mediating information and are no way responsible for what is being shared. Please avoid sharing and contacting black market resources. We strongly encourage to AVOID black market."

COVID RELIEF TEAM

<https://covidreliefteam0.wixsite.com/website>

"We are Aviral and Anan we have prepared a website for people suffering from covid and are in need of plasma, oxygen and blood. People can enter the resources they need along with their contact details those then will be forwarded to NGOs and hospitals."

JAIPUR COVID RESOURCES

https://www.instagram.com/jaipur_covid_resources/

An Instagram page that helps Jaipurites with covid resources. You can check out their posts for free food services, available beds, oxygen cylinders, plasma etc. Also, if you want to help the community by donating plasma, check out the link in their bio.

JAIPUR DIARIES

<https://www.instagram.com/jaipurdiariess/>

Jaipur Diaries is a one stop destination for everything Jaipur. You can check out their page to get updates on the Covid situation, learn how to keep yourself and your families safe, and get resources if you are in need. If you have recently recovered from Covid, then also use the link in their bio to donate plasma.

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THE RIGHT CLICK