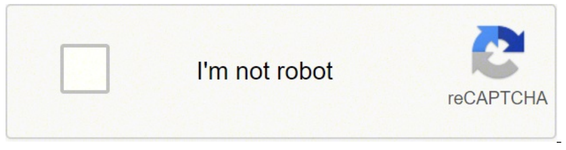
In general which of the following statements about metals is true



Verify

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Let’s remember the general properties of metallic elements. The electrical and thermal conductivity of metals originates from the fact that their external electrons are delocalized. Metals can be seen as a collection of atoms embedded in a sea of electrons, which are highly mobile. Metals usually tend to form cations by losing electrons, reacting with oxygen in the air to form oxides at various time intervals: for example, iron rusts for years, while potassium burns in seconds. Metals are generally malleable and ductile, deform under stress without cracking, and are also shiny and shiny. A metal can refer to an element, compound or alloy that is a good conductor of both electricity and heat. Example metals include gold, sodium, copper, iron and many other elements. Metals are usually malleable, ductile and shiny. Density of Metals Metals are typically made up of compact atoms, in the sense that atoms are arranged as compact spheres. In a metal, atoms easily lose electrons to form positive ions (cations). These ions are surrounded by dislocated electrons, which are responsible for conductivity. The solid product is held together by electrostatic interactions between the ions and the electron cloud, called metallic bonds. Metals are shiny and shiny with a high density. They have very high melting and boiling points because the metal bond is very strong, so atoms are reluctant to break into a liquid or gaseous. Sodium MetalSodium metal is soft enough to be cut with a plastic knife. Conductivity of metals Metals in general are conductive, with high electrical conductivity and high thermal conductivity. They are typically malleable and ductile, deforming under stress without cracking. For example, hitting a metal with a hammer will “teeth” the metal, it will not shatter it. The electrical and thermal conductivity of metals originates from the fact that their external electrons are delocalized. This means that the electrons are not blocked in an atom but can move freely through the metal. Metals can be seen as a collection of atoms embedded in a sea of electrons, which are highly mobile. This is very important for the conductivity of the metal. Sea of ElectronsThe “sea of electrons” is free to flow around the crystal of positive metal ions. Metals usually tend to form cations through the loss of electrons. One example is the reaction with oxygen in the air to form oxides over various time intervals (iron rustles for years, potassium burns in seconds). Transition metals (iron, copper, zinc and nickel) oxidize more slowly because they form a passive layer of oxide that protects the interior. Others, such as palladium, platinum and gold, do not react with the atmosphere. Some metals form a barrier layer of oxide on their surface, which cannot be penetrated by other oxygen molecules. As a result, they keep their shiny appearance and good conductivity for many many (As aluminum, magnesium, some steels, and titanium). Metals and non-metals have different properties and different reactions. These differences in reactivity depend on when an element is inserted into the periodic table. University of Houston Which of the following statements is (are) true? For false statements, correct them. a. Most of the known elements are metals. B. Element 118 should be a metalloid. C. Hydrogen has predominantly metallic properties. D. A family of elements is also known as a period of elements and. When an earthy alkaline metal, A, reacts with a halogen, X, the formula of the covalent compound formed should be $\mathrm {A} _{2}\mathrm {X}. Transcript: (Promotion) you are listening to Chemistry in its element brought to you by World Chemistry, the journal of the Royal Society of Chemistry (F). promo) Meera Senthilingam This week even art galleries can arouse chemical, or elemental, discussions. Andrea Sella.Andrea SellaSeveral years ago, I went with a friend for a small exhibition at the National Gallery in London. It was a rare opportunity to see the masterpieces of the Doria Pamphili Gallery in Rome. The piece was the famous portrait of Pope Innocent X by Velazquez, a spectacular snapshot of one of the most powerful men of his time, a tough character, looking into a golden throne, displaying a neat and ferocious goat and uncompromising glitter in his eye. Opposite was hung Francis Bacon of disturbing Three Screaming Popes, from nightmarish variants on the theme Velazquez'. The pictures were so ugly and brutal that I instinctively blinked and looked away, upwards. Unexpectedly, my eyes fell on a series of gold letters at the top of the door. Risi and my friend said to me, ‘What’s so funny? These pictures are simply horrible.' ‘Mond', I replied, ‘fantasy him to find here.' ‘Who?' he asked, perplexed. ‘Mond,' I said. ‘This gallery was endowed by Ludwig Mond, the chemist who made nickel available to the world.' I fully expected her to look up and give me that pity look that women reserve the moment when the real nerd in a man is finally revealed.But there was none of that. ‘I’ve never heard of him,' he said. ‘Did you find out?' ’No. He didn’t. Nickel was known for some time before – it had been used in China and Peru to make some sort of steel. But it was not until the 19th century, that two Swedish chemists, Cronstedt and Bergmann established among themselves that it was an element. It was called nickel after one of its minerals, a reddish material which the German miners called kupfernickel – St. Nicholas' copper. ‘But isn’t nickel pretty bad? Wasn’t there any problem with nickel jewelry?' my friend asked.‘Yes. Nickel has long been used in alloys and other plate - Nickel provides a durable and brilliant durable coating that protects the object from corrosion '. 'oh, you mean a little like chrome' '.yes, a little like chromium, but less vulgar - chromium gives a bright shine. Nickel is a little bit moreIt means class. “” I guess so. But the problem is that in contact with the skin, as in jewelry, the tiny amounts of nickel dissolving in the sweat of the tired was enough to cause skin reactions in some people and the use of nickel turned out not to be a great idea. “But what about Mond? “Oh yes. Right. I answered. ‘Mond was a German chemist who moved to the UK. And he had a problem -- he was passing carbon monoxide gas through nickel valves and they kept failing and forgiving. Which assistant and his assistant Langer discovered was something extraordinary – that his valves were corroding because the metal reacted with carbon monoxide, to make a compound called Nickel Carbonial. “So, what? “ Ben charbonil carbonil has proven to be colorless very volatile Liquid, one that shrinks just below room temperature. “ hmmm. It looks a little bad, “said dubious.” Yes. Very much. Since it is so volatile, you have to be really careful when you handle it if you breathe it in, it will decompose releasing poisonous carbon monoxide and dumping metallic nickel into the lungs. So it’s really very dangerous. But in a way, that’s the beauty of it: nickel carbonyl is incredibly brittle. If you heat it up, you shake it to pieces, and you get nickel and carbon monoxide. So what Mond had been a delightfully simple way to separate and purify nickel from any other metal. And what happens more, it could recycle carbon monoxide. “Wow. ““ Mond was not just an observant chemist. He was also a pretty experienced businessman. He patented his process and created in business to sell the purest nickel at much lower prices than anyone else. It made an absolute fortune, and then steadily expanded into other areas of chemistry. His venture would eventually form the core of the imperial chemical industries, ICI, the conglomerate set up to defend British interests against, ironically, the onslaught of the German chemicals industry in Burgeoning. ““So what do people do with nickel today, if it’s that bad”, he asked. “Well, it’s not really that bad, as long as you’re careful what you use it. In the 1960s, another German chemist named Wilke developed nickel compounds as cheap and simple catalysts for the petrochemical industry to bind together small carbon molecules. It is also used in all kinds of alloys. There is Invar which is a kind of metal Pyrex, which does not expand or contract when you change the temperature. There is Monel, a steel so resistant to corrosion that it will even resist fluoride, which only moves away on anything. And there’s the really weird memory metal, an alloy that no matter how much you skull and fold, remembers its original shape and returns to it. And then there are made of nickel and aluminum with a cup of boron which are extremely lightweight and actually become harder while you heat them up – so they are used in aircraft and rocket turbines. “I could see that I was going a little too far. We’re back to the Pope. “It must have been a freak”, I said. ‘You ‘You What do I like about you? " My friend asked me to give a compression on his arm. It's going to see the paintings and finish to hear strange things. And you know what I like about you, I replied. It is that my humor when I leave. There is no doubt that you expect to say that everything happened happily. He didn't do it, and I haven't seen it for years. But strangely, every time I think of Nickel, I think of her. And the dirty appearance that gave me the Pope. Meera Sendhilingam so superalloys, relationships and the Pope, than several chemical thoughts and nickel stories causes. It was Andrea Sella dell'UCL with a contemporary story in Nickel. Next week the discovery of xenon. Peter Wothers The story of Xenon begins in 1894 when Lord Rayleigh and William Ramsay were investigating because the nitrogen extracted from chemical compounds is about a half a hundred lighter than nitrogen extracted from the air - an observation made before from Henry Cavendish 100 years earlier. Ramsay found that after atmospheric nitrogen reacted with the hot magnesium metal, a small percentage of a heavier gas and even less reactive is left above. They called this argon gas from the Greek for lazy or inactive to reflect its extreme inertia. The problem was, where does this new element insert into the periodic table of the elements of Mendeleev? There were no other known elements that resembled them to suspect that there was an entire family of elements still to be discovered. It was a case. Meera Sandhilingam and to feel like this story has been presented, leading to discover a new family of elements, as well as Xenon who would go ahead to illuminate our roads and propelled space ships unite Peter Wothers of Cambridge University in him . Until then thank you for listening, I'm Meera Signhilingam (Promo) (End Promo) Promo)