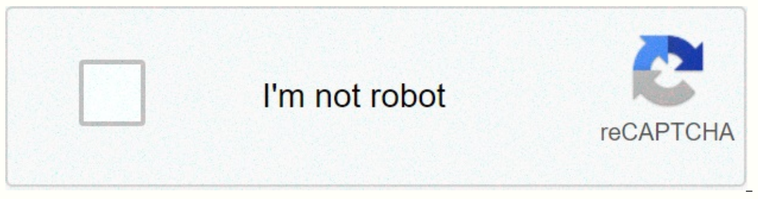

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Cu(oh)2 decomposition reaction

Cu(OH)2 CuO + H2O Thermal copper decomposition into hydroxide causes copper oxide and water. This reaction occurs at a temperature close to 200 °C. Find another reaction Please register to post comments On Page 2 Cu(OH)2 CuO + H2O [Проверить балансировку] Реакция термическ 100 000 000 000 000 000 000 000 000 000 000 000 000 000 000 000 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 0 0 00 00 0разложения гидроксида меди(II) с образованием оксида меди(II) и воды. Реакция протекает при температуре около 200°C.Гидроксид меди виде супензии разлаться при темере 40-80°C. Найти другую реакцию Теререакцию Термодинамические свойства веществв Растворимость веществ blue cupric hydroxide Cu(OH)2, is broken down with heating into black cupric oxide hard< CuO. This is a cleavage reaction because it breaks down Cu (OH)2 into two different molecules. To continue enjoying our website, please confirm your identity as a human being. Thank you very much for your cooperation. Goals Reaction procedure Illustrates the element of various materials, part of which can be: metal --> blue solution --> blue solid --> black solid --> blue solution (again) --> metal (again). Saving the masses and moles: We should recover as much copper as we started. The same amount of copper at each stage: the same number of moles. Experience of standard chemical methods: filtering and quantitative transfers. Cu(s) --> [Cu(H2O)6]2+(aq) --> Cu(OH)2(s) --> CuO--> [Cu(H2O)6]2+(aq) --> Cu(s) Copper metal dissolves in nitric acid (HNO3). In fact, nitrate is oxidizing copper metal into copper (II)ion, and in the process itself turns into NO2 gases; copper (II)ion binds to six water molecules. The physical change you should observe is the disappearance of copper metal as the solution turns blue (from [Cu(H2O)6]2+, hexaaquacopper ion) and brown gas (NO2) develops. Cu(s) + 4 H3O+ (aq) + 2 NO3-(aq) --> [Cu(H2O)6]2+ (aq) + 2 NO2 (g) Hydroxideion (OH-) binds to copper (II)iono even more strongly than water. As a result, hydroxide may epel water from copper (II)ion, which makes copper hydroxide Cu(OH)2 blue precipitate. [Cu(H2O)6]2+ (aq) + 2 OH- --> Cu(OH)2 (s) + 6 H2O (l) Copper oxide CuO, black solid, when heating copper hydroxide. Cu(OH)2(s) --> CuO(s) + H2O (l) Copper oxide dissolves in acid, regenerates copper (II)ion, which reconnects to water. CuO(s) + 2 H3O+ (aq) + 3 H2O (l) --> [Cu(H2O)6]2+ (aq) Finally, zinc metal reduces the hydrated copper (II) ion back into metal copper and turns itself into oxidised into zinc (II) ions. We have already seen this reaction in the laboratory of copper chloride). [Cu(H2O)6]2+ (aq) + Zn(s) --> Cu(s) + Zn2+ + 6 H2O (aq) At the same time, some zinc metals, which is an excess, reduces the hydronionium ion H2.Zn(s) + 2 H3O + (aq) --> Zn2 + (aq) + H2 (g) + 2 H2O (l) I will not go through the procedure step by step in detail, but I emphasize some safety points and (highlight) in some places where our procedure differs from the laboratory package. Transform cu(s) into [Cu(H2O)6]2+(aq) Attach a piece of copper wire and weigh it in a capacity of 0,01 g. The pieces of wire are closer to 0,50 g than 0,35 g. It's good: use the pieces that we provide. Use about 4-5 ml of concentrated solution of HNO3. Be careful with nitric acid: like other strong acids, it will be sore, if you get it on the skin and can damage clothes; unlike many other acids, it will also stain the affected area yellow. If some coppers remain unexplored until the end of gas production, then place the glass on hot plates in the hoods to resume the reaction. It is important to perform this step in the thrust hood, because the brown NO2 gas is irritating. Keep the mixtures in the enclosure until you add 10 ml of distilled water after complete dissolution. Transform [Cu(H2O)6]2+ (aq) to Cu(OH)2(s) Be careful when handling NaOH as this is a strong foundation that stings if it merges with the skin. Drip naoh solution into the copper solution. After forming the blue precipitate, periodically test the acidity of the solution by immersing the mixing rod in the solution and tapping it into the red litmus paper. Try not to exaggerate the blue deposits on litmus paper: this will lead to a certain loss of copper and possibly the false blue on litmus paper. The solution begins to acidify due to the excess nitric acid from the previous stage, so the first added OH enters the neutralization of acid; when the acid is neutralised, the next added OH goes into the formation of blue Cu(OH)2 sediment. Only after it is finished does not add OH-hang around idle, and only at that time it will become red litmus paper blue. We want to make sure that all copper is now turned into Cu (OH)2, so we add OH- until the solution turns into litmus paper blue. Transform Cu(OH)2(s) into CuO Add water to the reaction mixture obtained at the previous stage and also add one or two boiling stones. Heat the contents of the glass, but do not boil. Cooking makes the black cuo so good that the filtering step is too long. Preheat the glass until all blue Cu(OH)2 has disappeared and replaced with a black CuO. Filter and wash the CuO as described in the procedure (Part C). Keep the hard material on the filter paper and discard the filtrate. Transform the CuO back to [Cu(H2O)6]2+(aq) Dissolve cuo on filter paper as described in the procedure (Part D). Sulphuric acid solution is corrodynamic and has acquired the skin with which it comes into contact. Transform [Cu(H2O)6]2+(aq) back to Cu(s) Add about 1 g blue solution obtained at the previous stage, and after the solution has lost the entire blue color, you may need to add a little sulfuric acid to react to any excess of Zn. Wash the copper metal three times with distilled water and transfer it to the evaporation vessel as described in the procedure (Part E), then wash three times with 5 ml of isopropanol portions. Washing with isopropanol will reduce the time required for the drying step. Dry the copper on a glass of boiling water as described in the procedure (E). Weigh dry copper and record the mass. Calculate the percentage of copper recovered. Back to the Chemical Principles Lab schedule. Return to web chemical tools menu