HOW TO WRITE A FORMATION REACTION VIDEO

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So there was some heat that was released, 74 kilojoules, and so our internal energy dropped. So we can just write it as delta H of formation for C plus delta H of formation for D. So plus So the reaction starts off at your initial enthalpy, Hi and that's this state right here. So ammonia in the gaseous state has a heat of formation of minus So let's just look them up. And all I have are the heats of formation. And then I have some molecular hydrogen gas. So this is all abstract and everything, and I've told you about Hess's Law. And just as a side note, given that the heat of formation of nitrogen monoxide is positive, that means that you have to add heat to a system to get this to its elemental form. If a reaction needs energy to occur, it's endothermic. And as you see, enthalpy, the pressure we're assuming is constant. So let me write that down. So for example, if we want it for methane-- if we have methane there, and we want to figure out its heat of formation, we say, look, if we form methane from its elemental forms, what is the delta H of that reaction? But this by itself isn't that useful or that intuitive. And it's normally given at some standard temperature and pressure. And am I starting in the gaseous or the aqueous state? So all of these things we can look up in a table, right? It is amazing how exhaustive these lists really are. So you know, if this was like carbon dioxide, you'd be going back to the carbon and the oxygen molecules. So how much heat is formed when we combust one mole of propane right here? We got minus 74 kilojoules. One half of molecular oxygen as a gas to go to one mole of oxygen in its gaseous state. It was minus 74 kilojoules. Now you might tempted to say, OK. And I wanted to figure out what was the change in enthalpy of this reaction? And it would also be minus the same thing for B. And we could look up in a table that heat of formation of C, which is change in enthalpy. Even though we kept calling it heat of formation, it's actually the change in enthalpy. And because it has lower potential energy, it's more stable. And then we have our heat of formation of B-- delta heat of formation, let me call it, of B. So if a reaction releases energy, exothermic. So oxygen, if you just had a bunch of oxygen sitting around, it's going to be in the O2 form. So what do we get? Because most chemical reactions, you know, we're sitting at the beach with our beakers, and they're exposed to just standard temperature and pressure, or at least some pressure, that's not changing as the reaction occurs. And the word for this we use is exothermic.