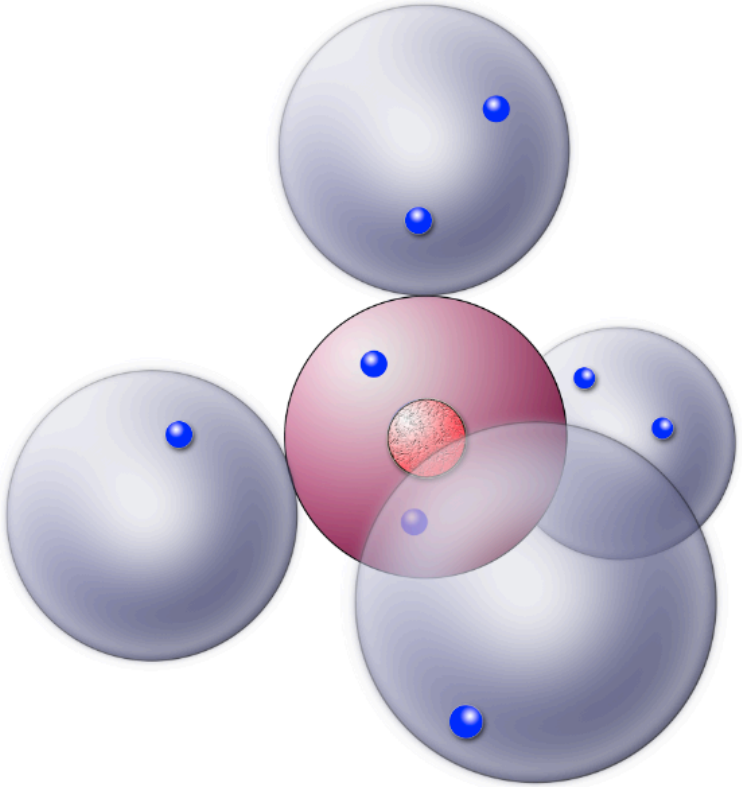
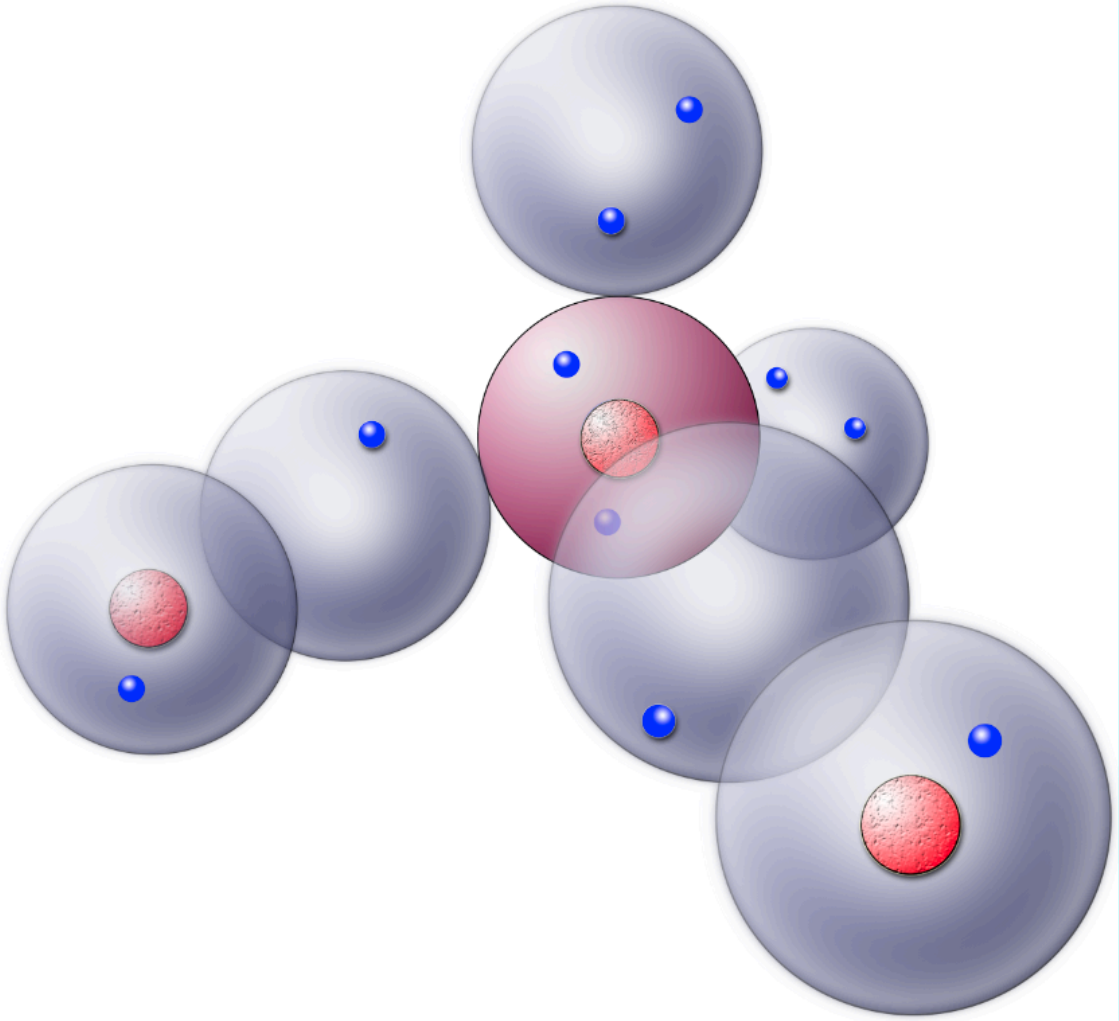
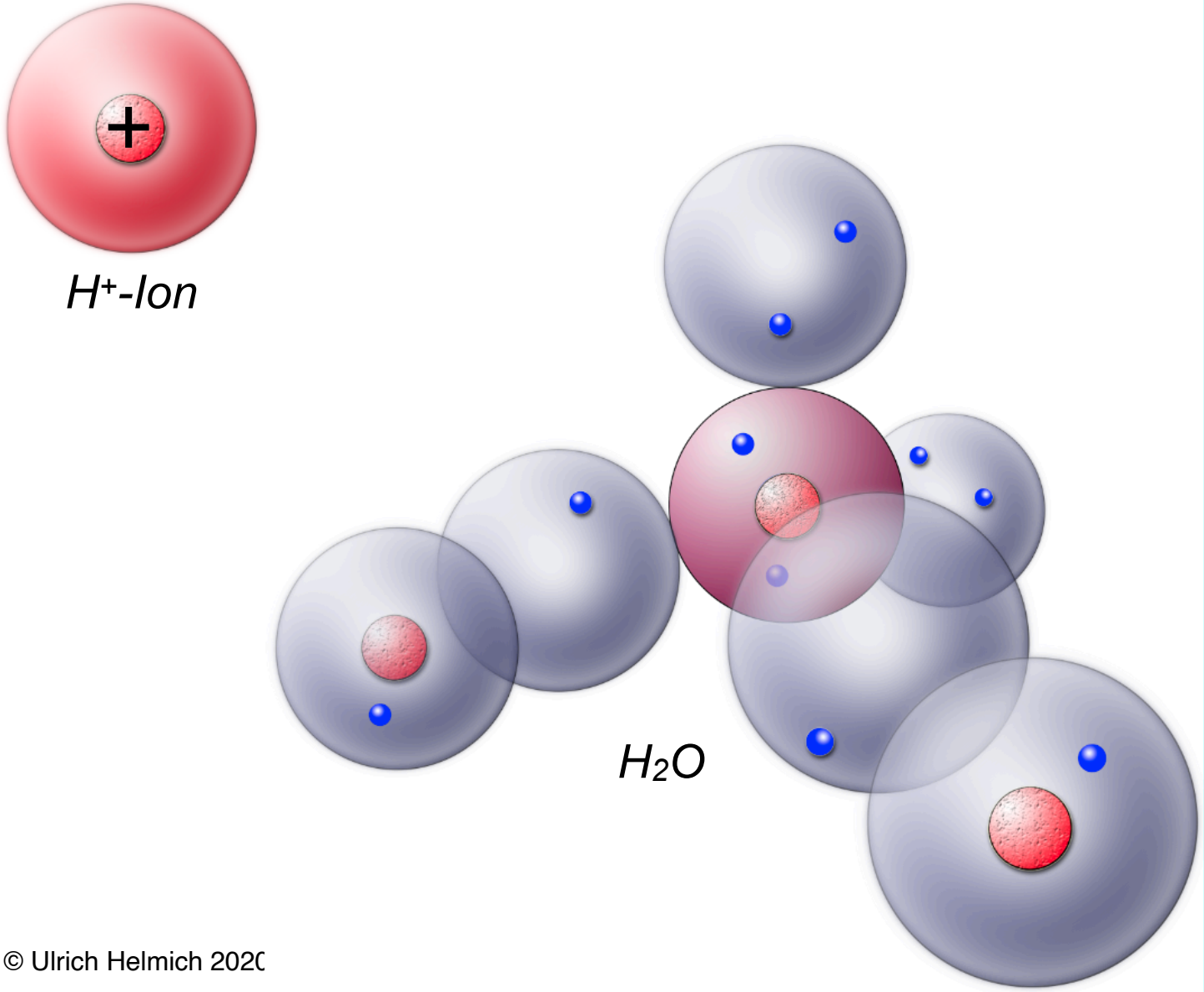
Das O-Atom



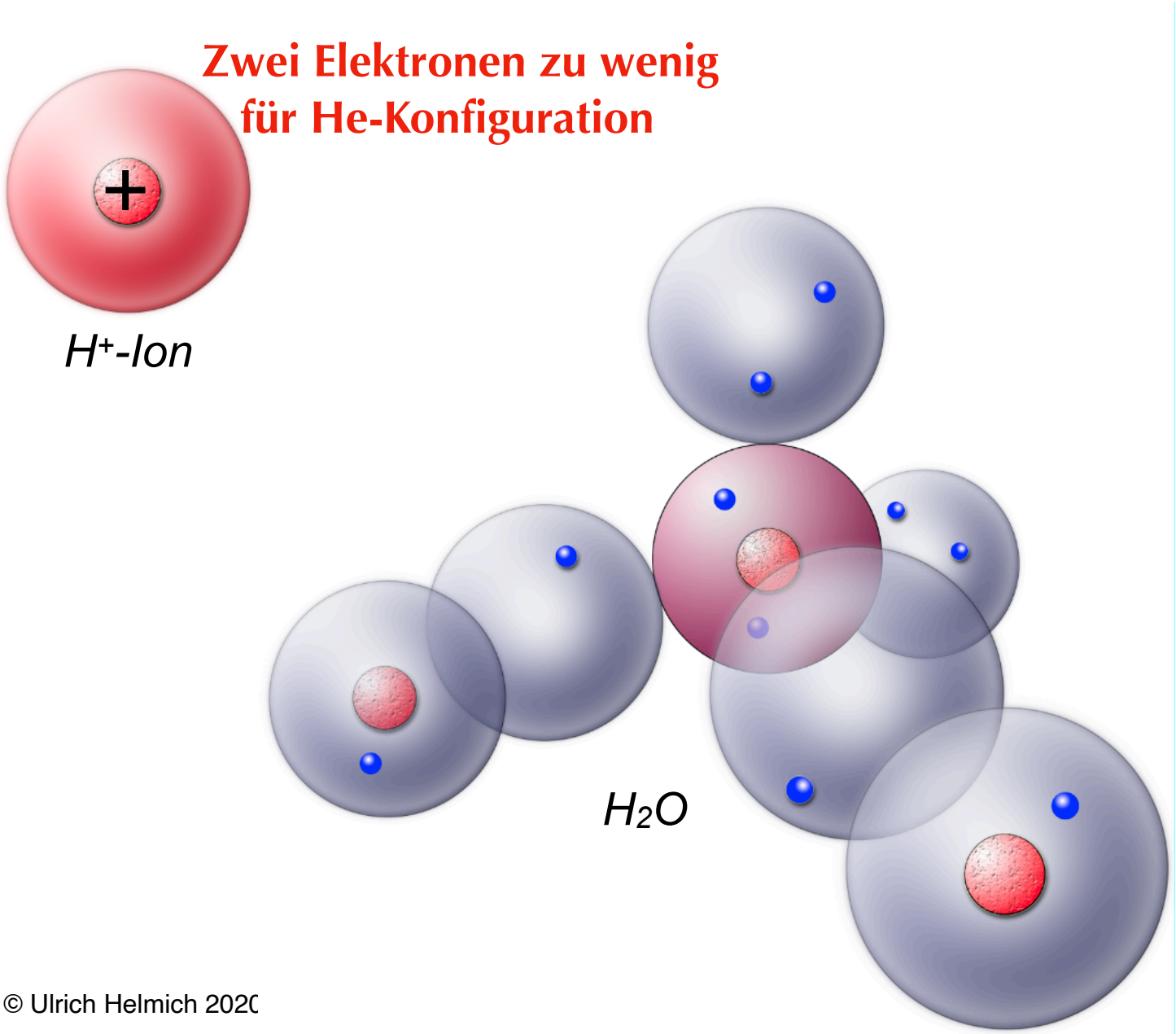
Das H_2O-Molekül



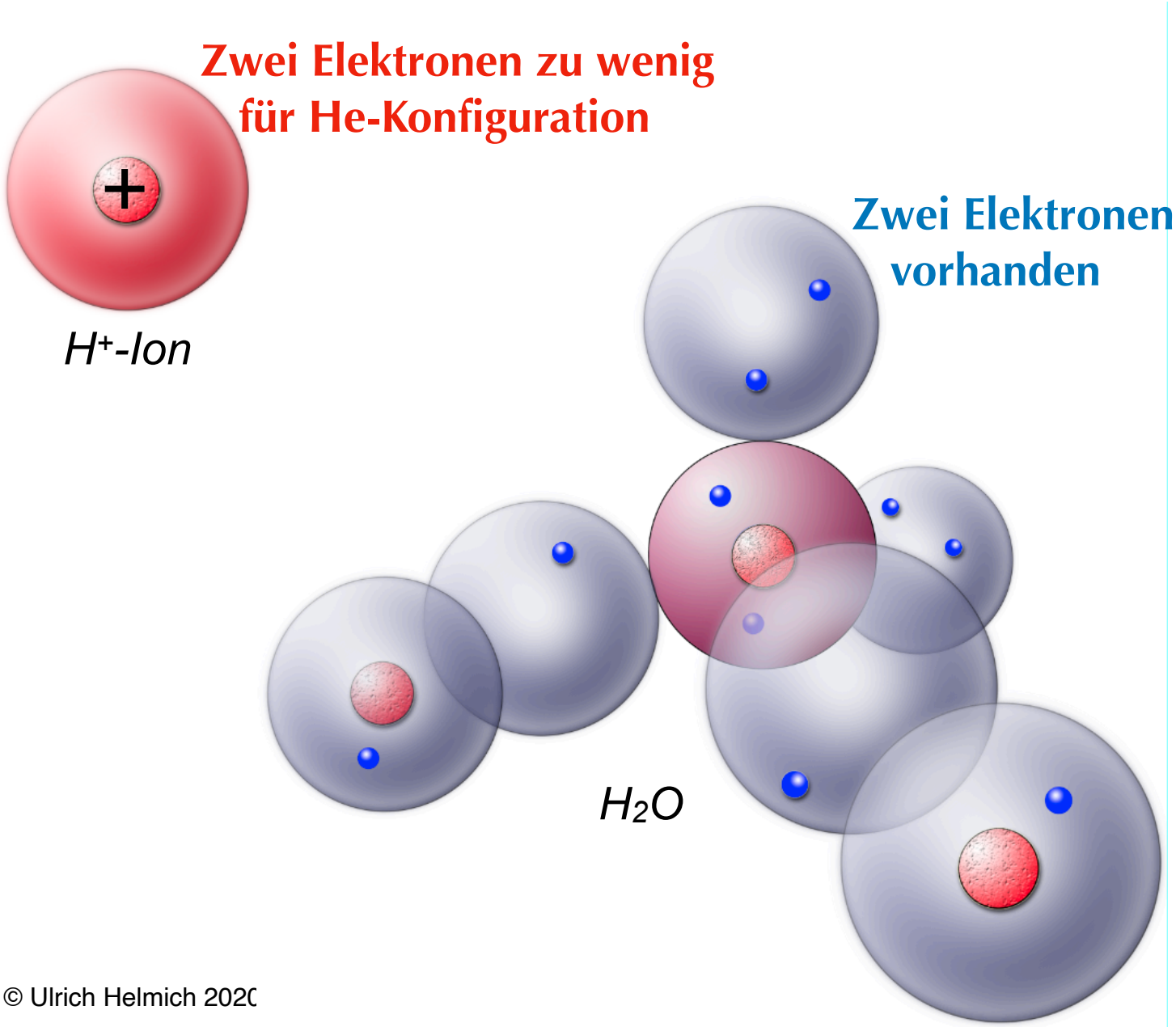
Bildung des H_3O^+-Ions



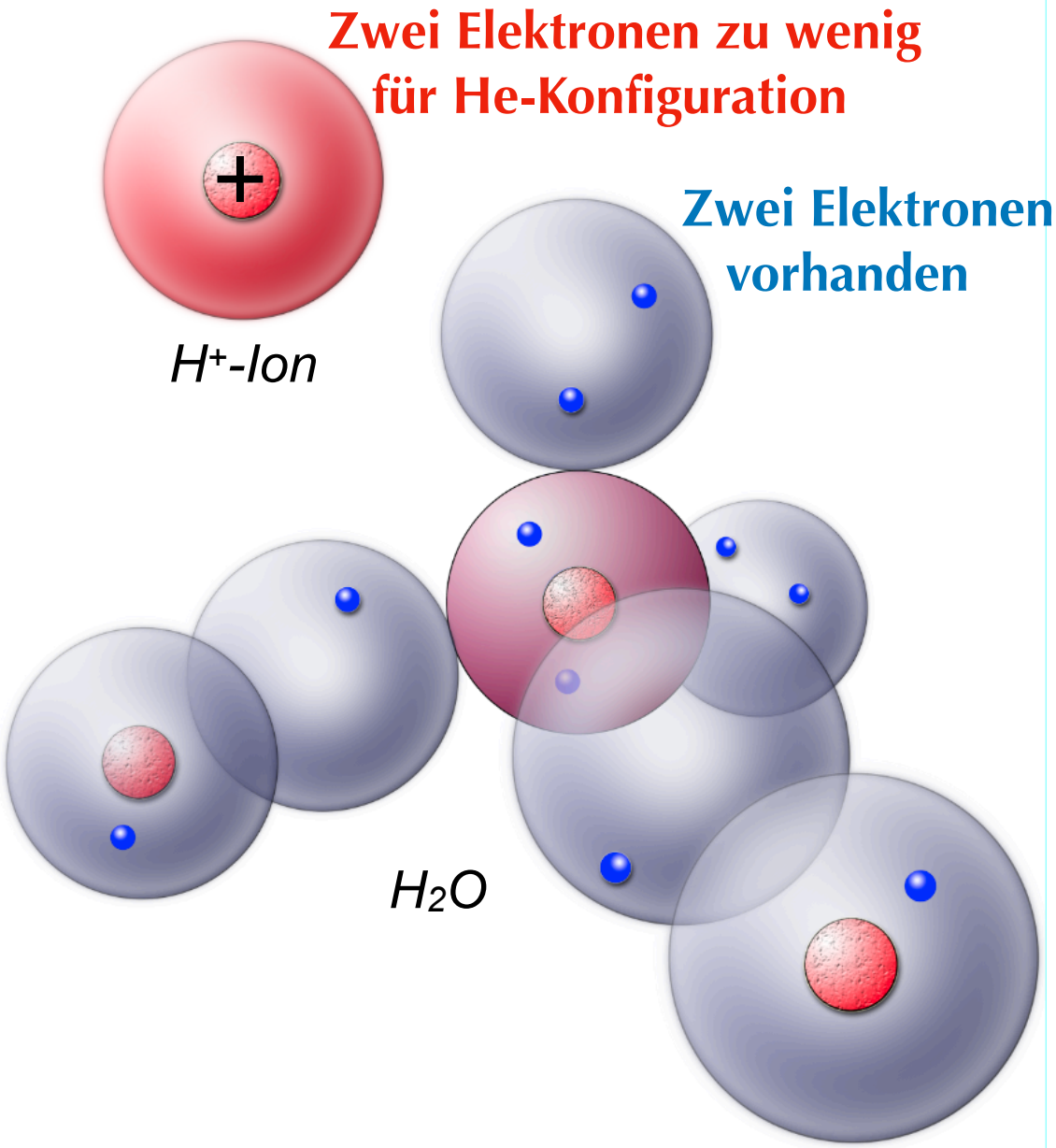
Bildung des H_3O^+-Ions



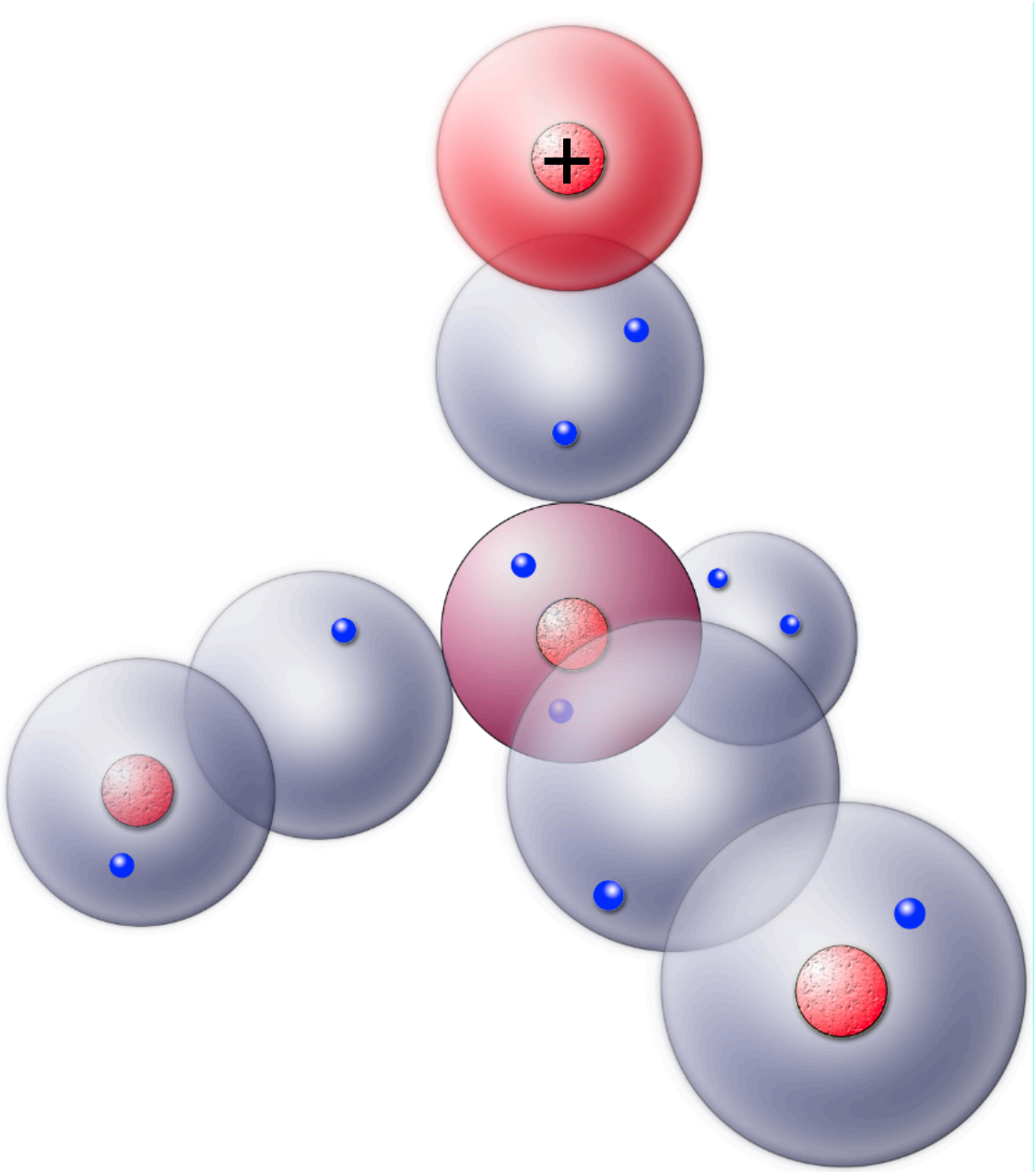
Bildung des H_3O^+-Ions



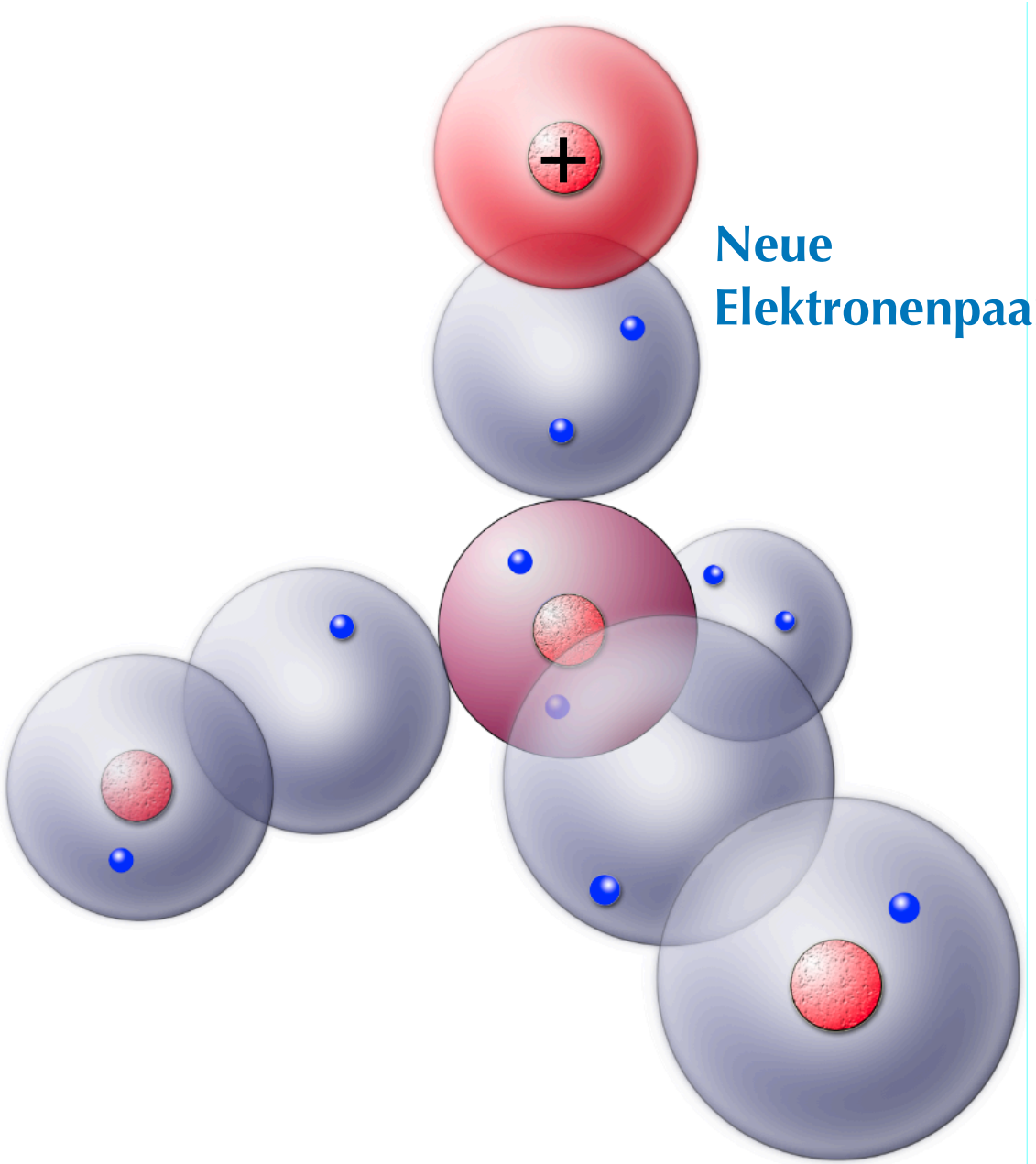
Bildung des H_3O^+-Ions



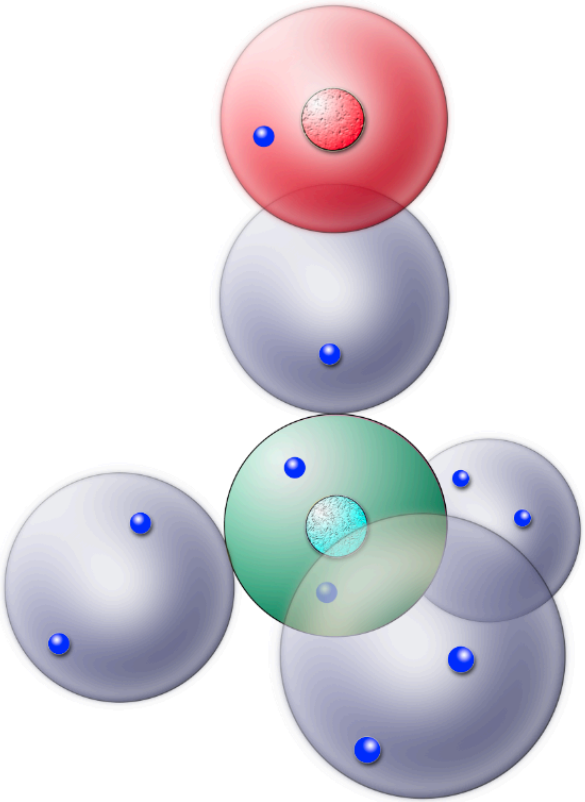
Bildung des H_3O^+-Ions



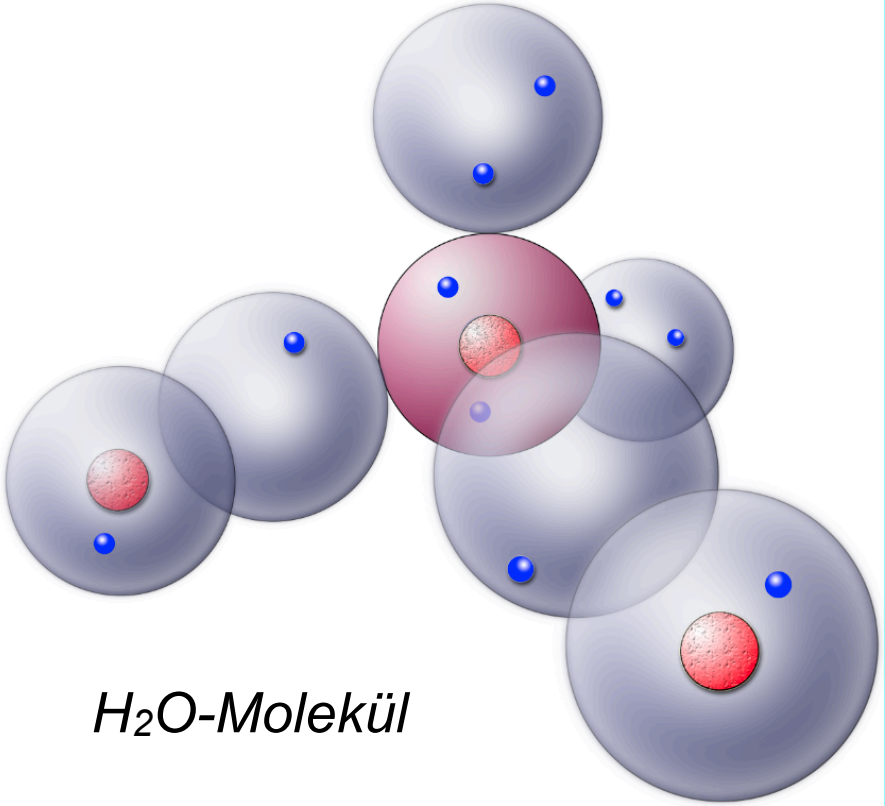
Bildung des H_3O^+-Ions



Protolysereaktion HCl + H_2O

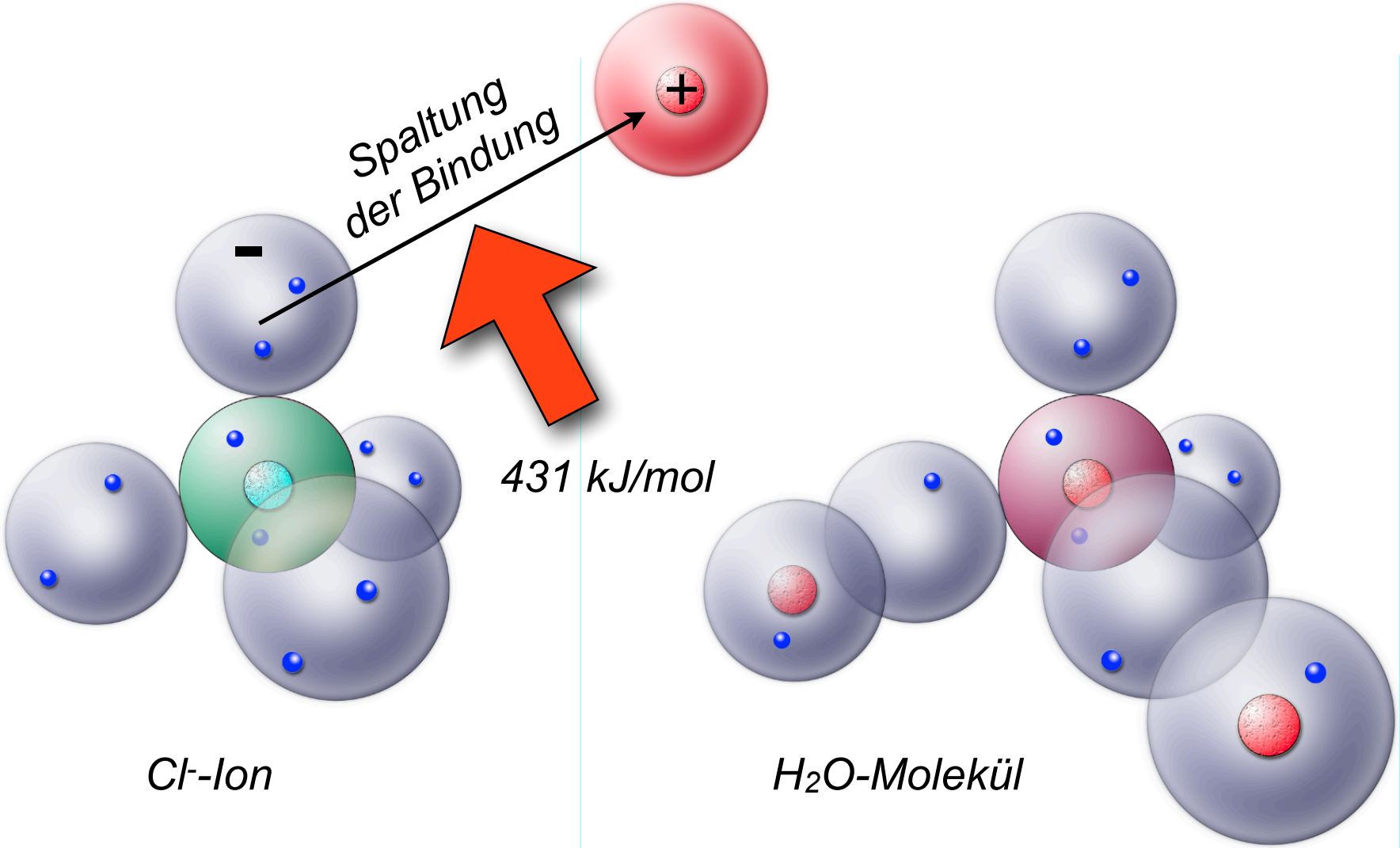


HCl-Molekül

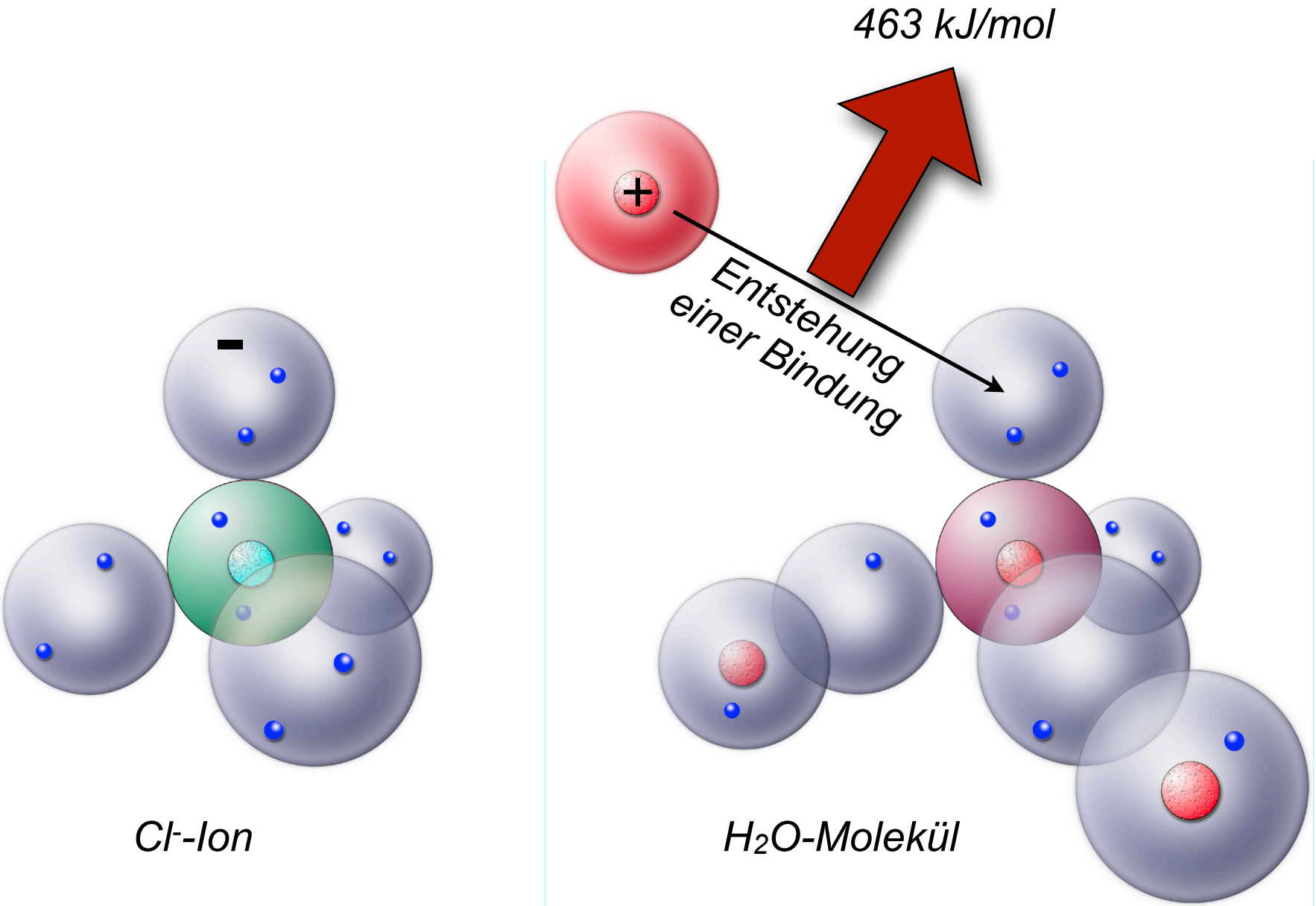


H_2O-Molekül

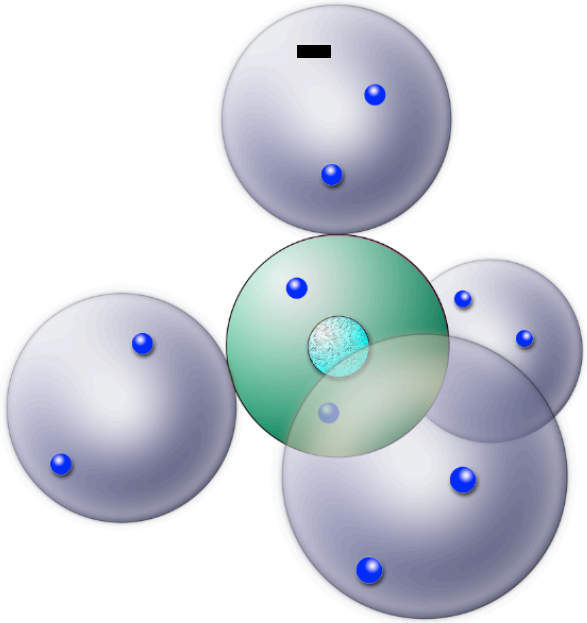
Protolysereaktion HCl + H_2O



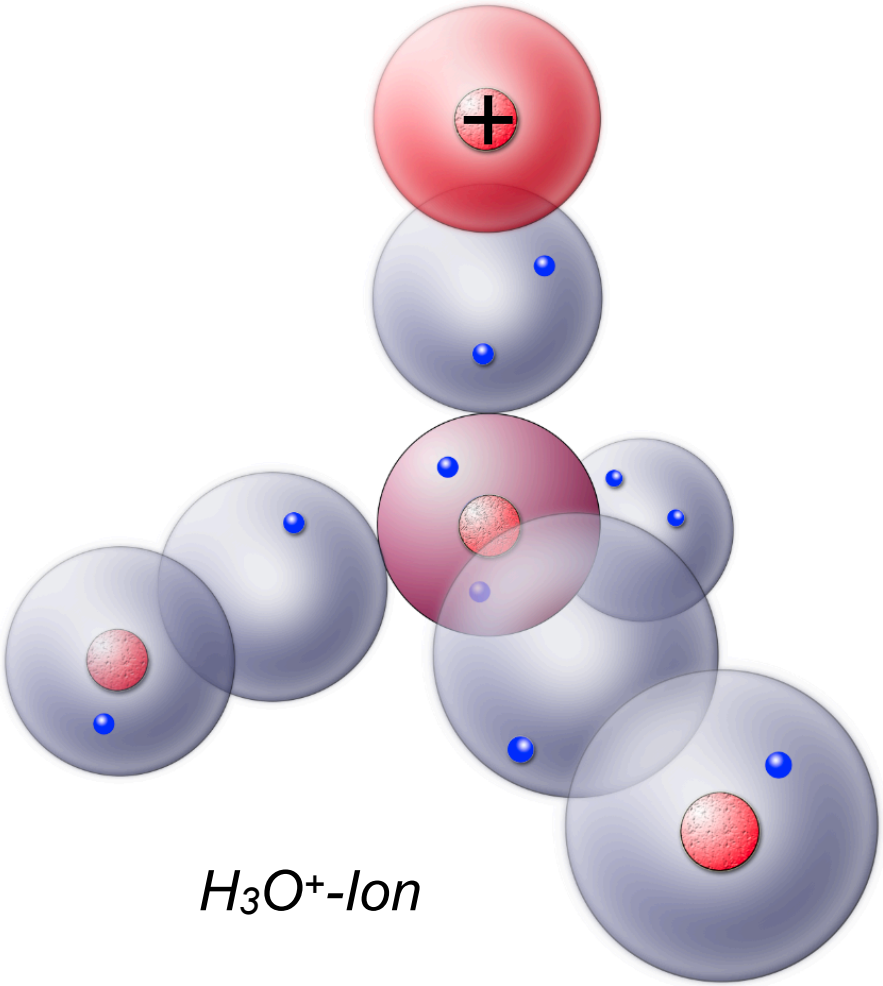
Protolysereaktion HCl + H_2O



Protolysereaktion HCl + H_2O

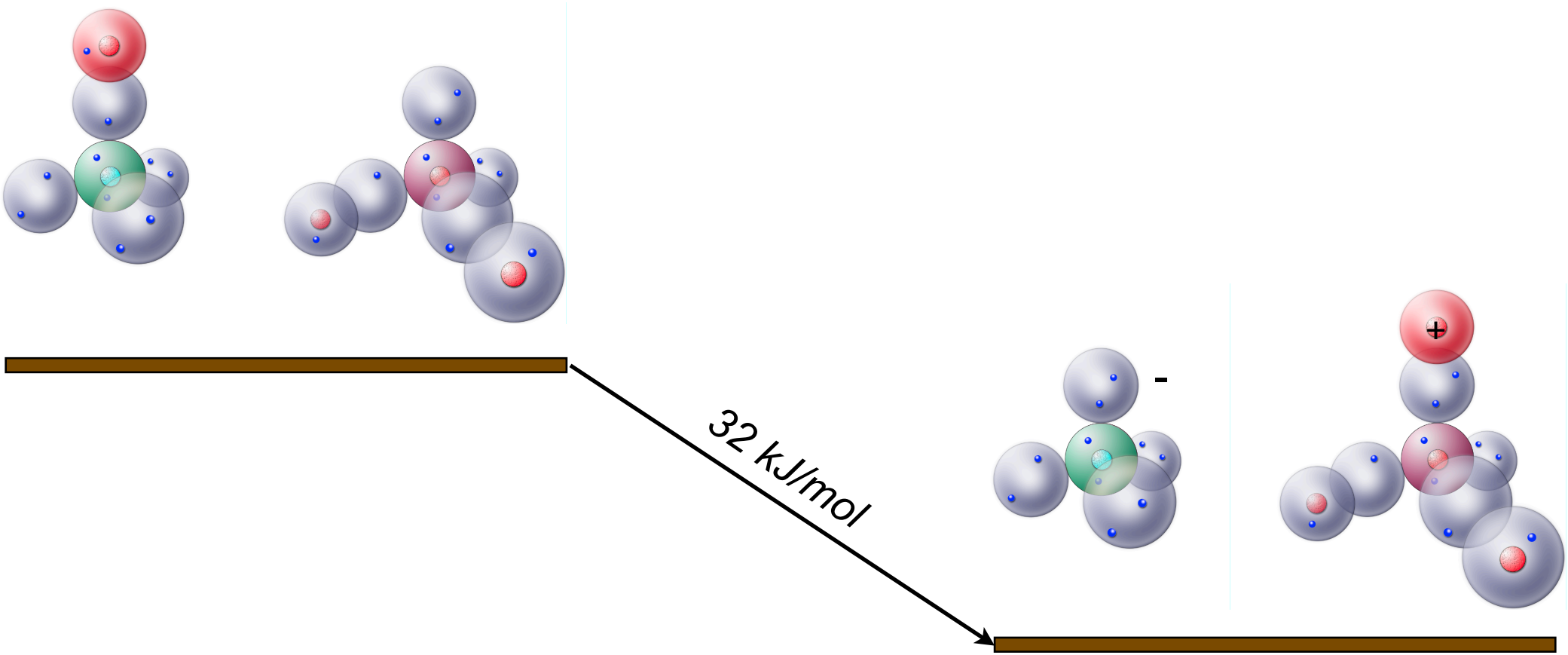


Cl^--Ion

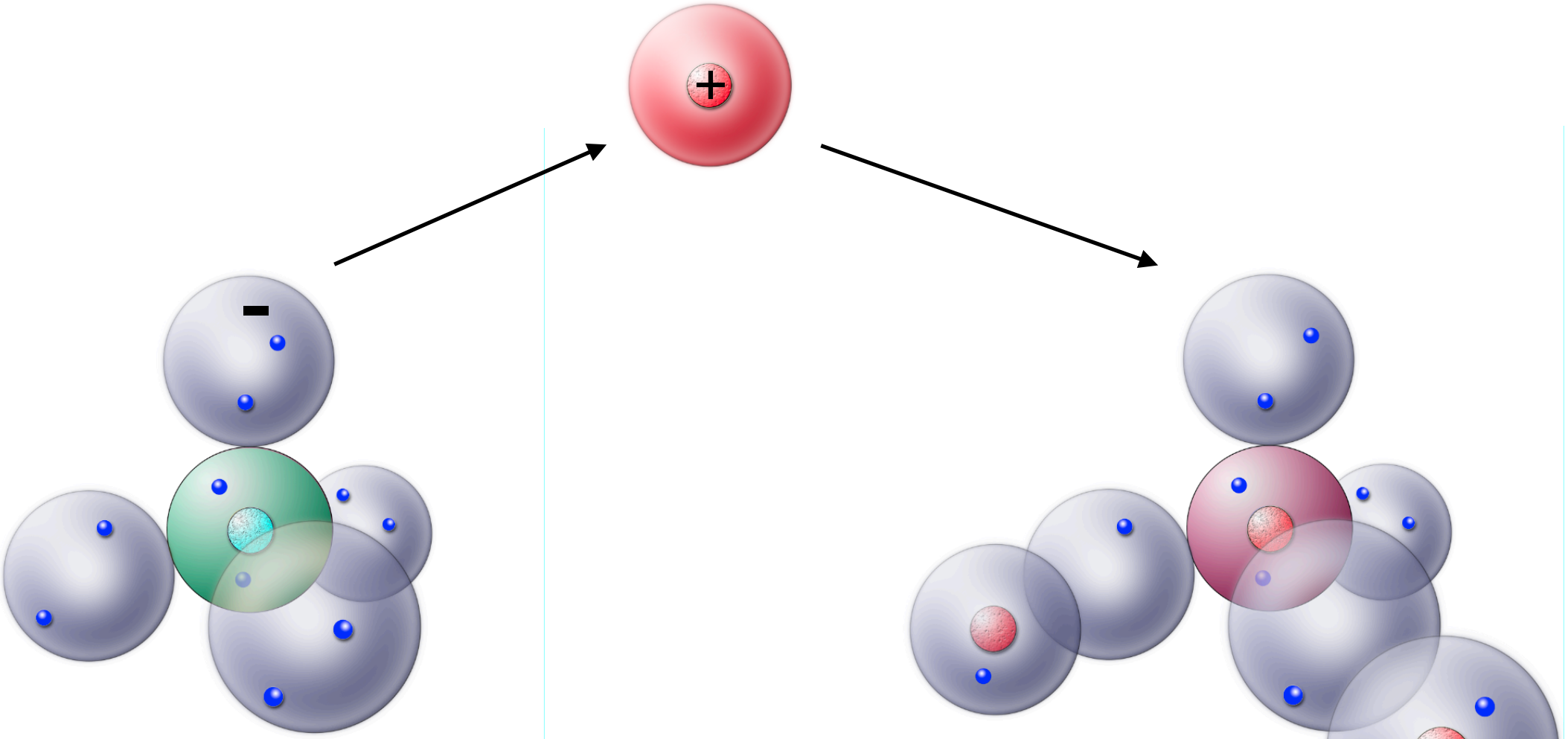


H_3O^+-Ion

Energieüberlegungen



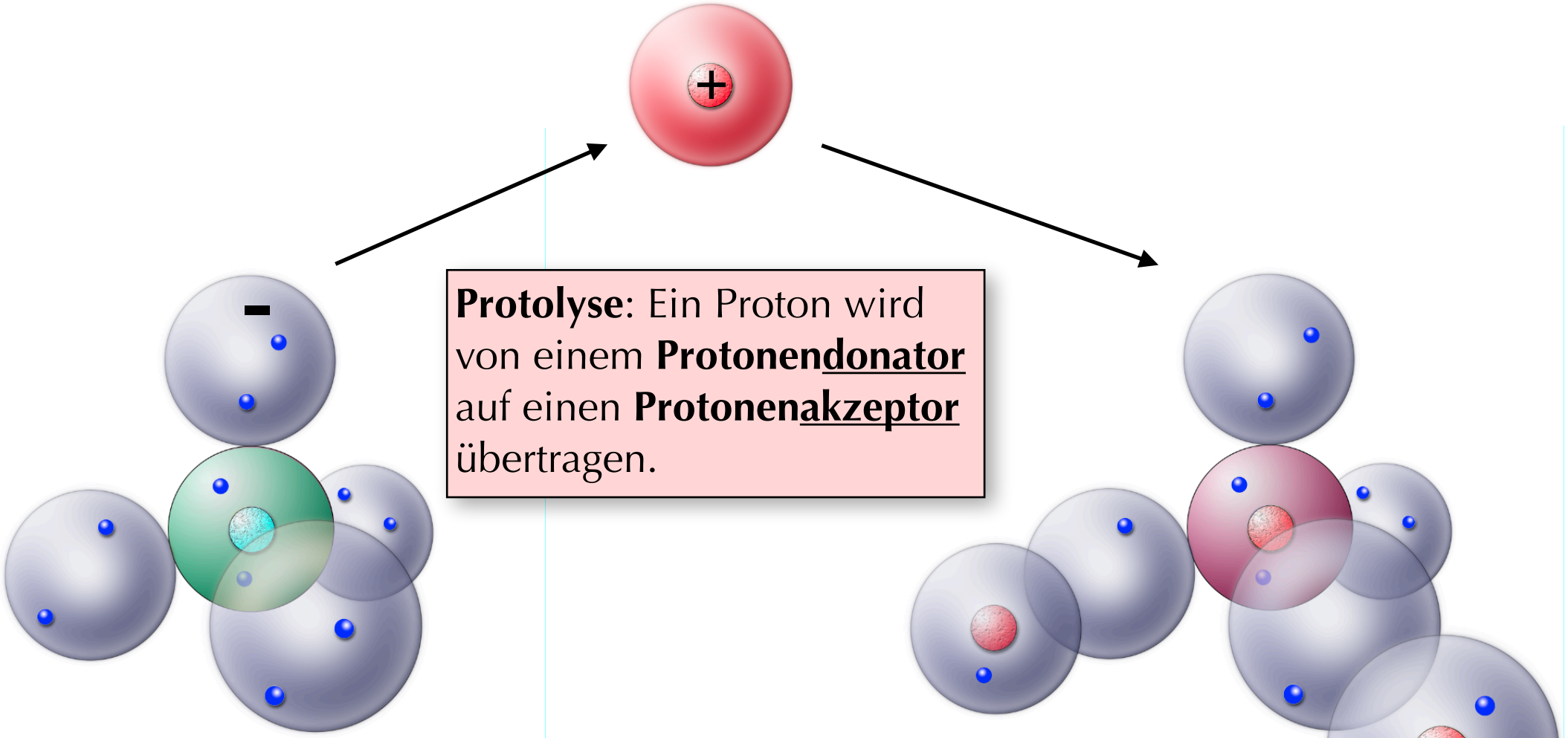
Protolyse



***Protonendonator**:*
Ein HCl-Molekül

***Protonenakzeptor**:*
Ein H_2O-Molekül

Protolyse

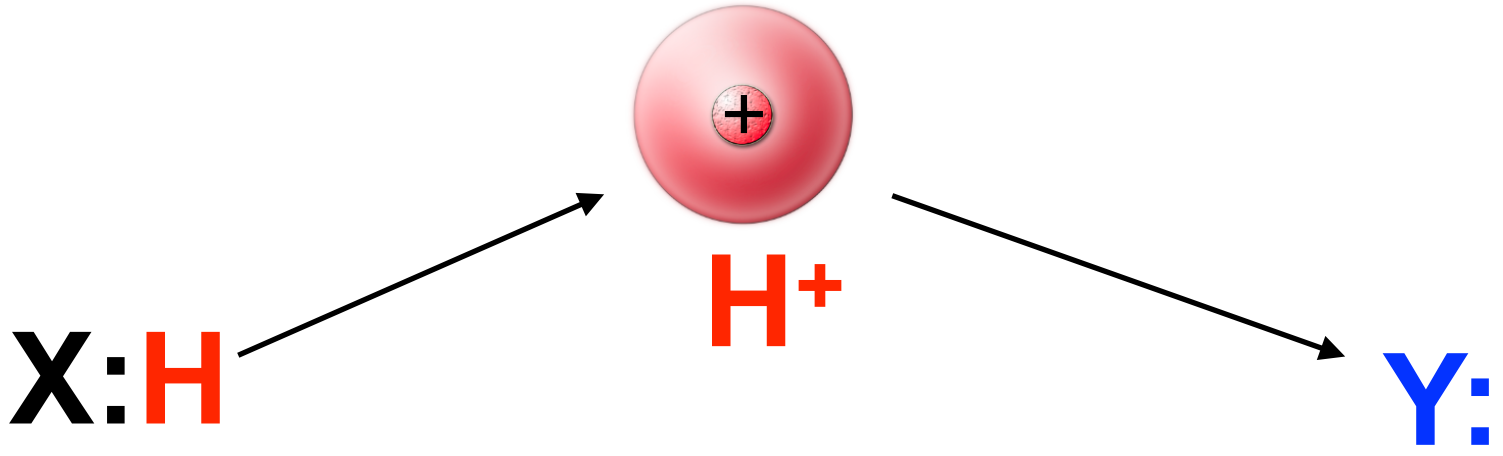


Protolyse: Ein Proton wird von einem **Protonendonator** auf einen **Protonenakzeptor** übertragen.

***Protonendonator**:*
Ein HCl-Molekül

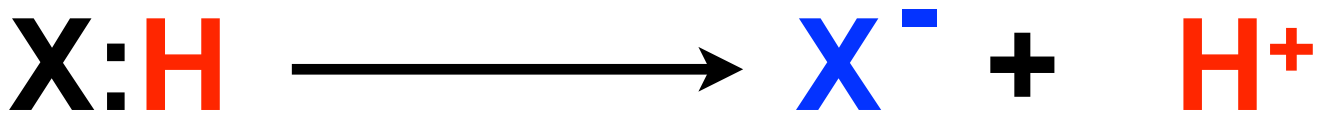
***Protonenakzeptor**:*
Ein H_2O-Molekül

Protolyse

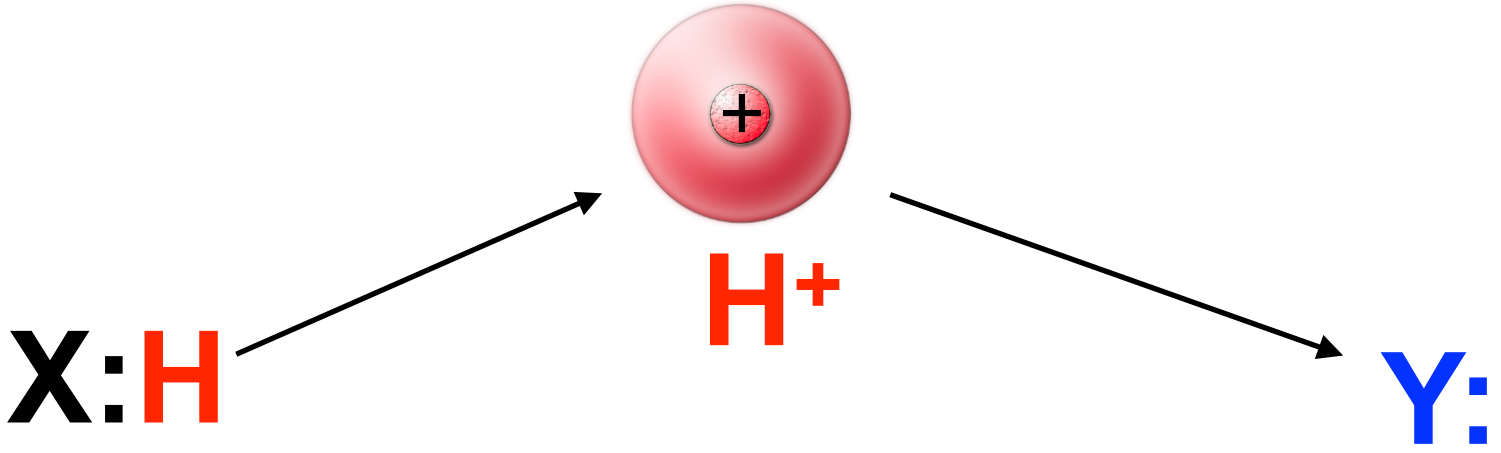


Protonendonatoren

Teilchen, bei denen ein H-Atom mit einem elektronegativen Atom **X** durch eine polare kovalente Bindung verbunden ist, die leicht heterolytisch gespalten werden kann.



Protolyse



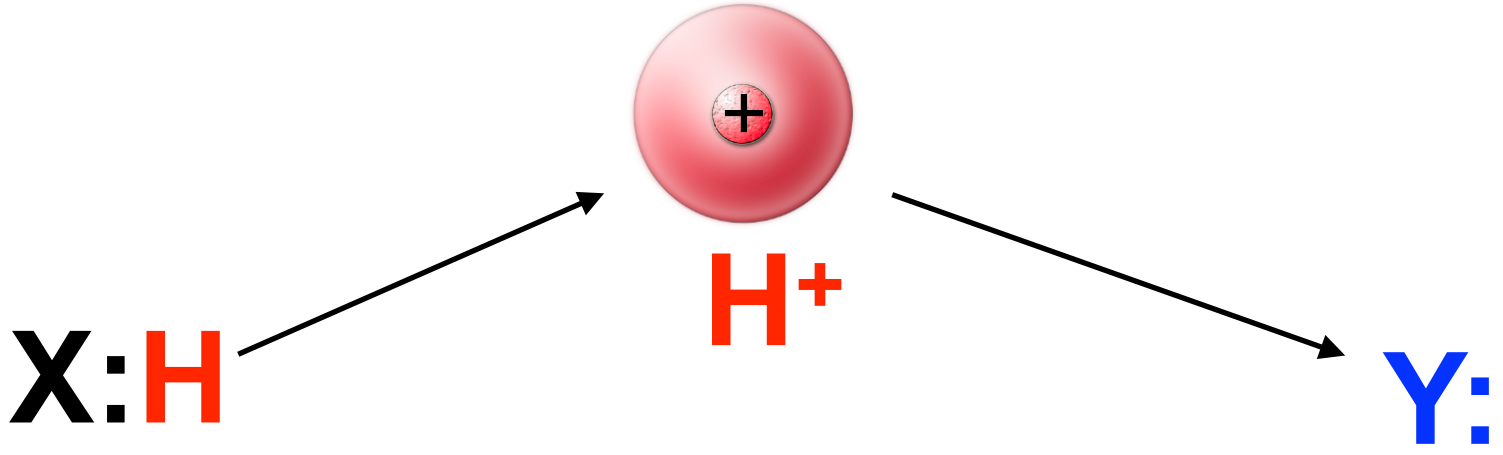
Protonenakzeptoren

Teilchen, bei denen ein elektronegatives Atom **Y:** ein freies Elektronenpaar zur Verfügung stellt, an das ein Proton "andocken" kann.

$$Y:^- + H^+ \longrightarrow Y:H$$

$$Y: + H^+ \longrightarrow Y:H^+$$

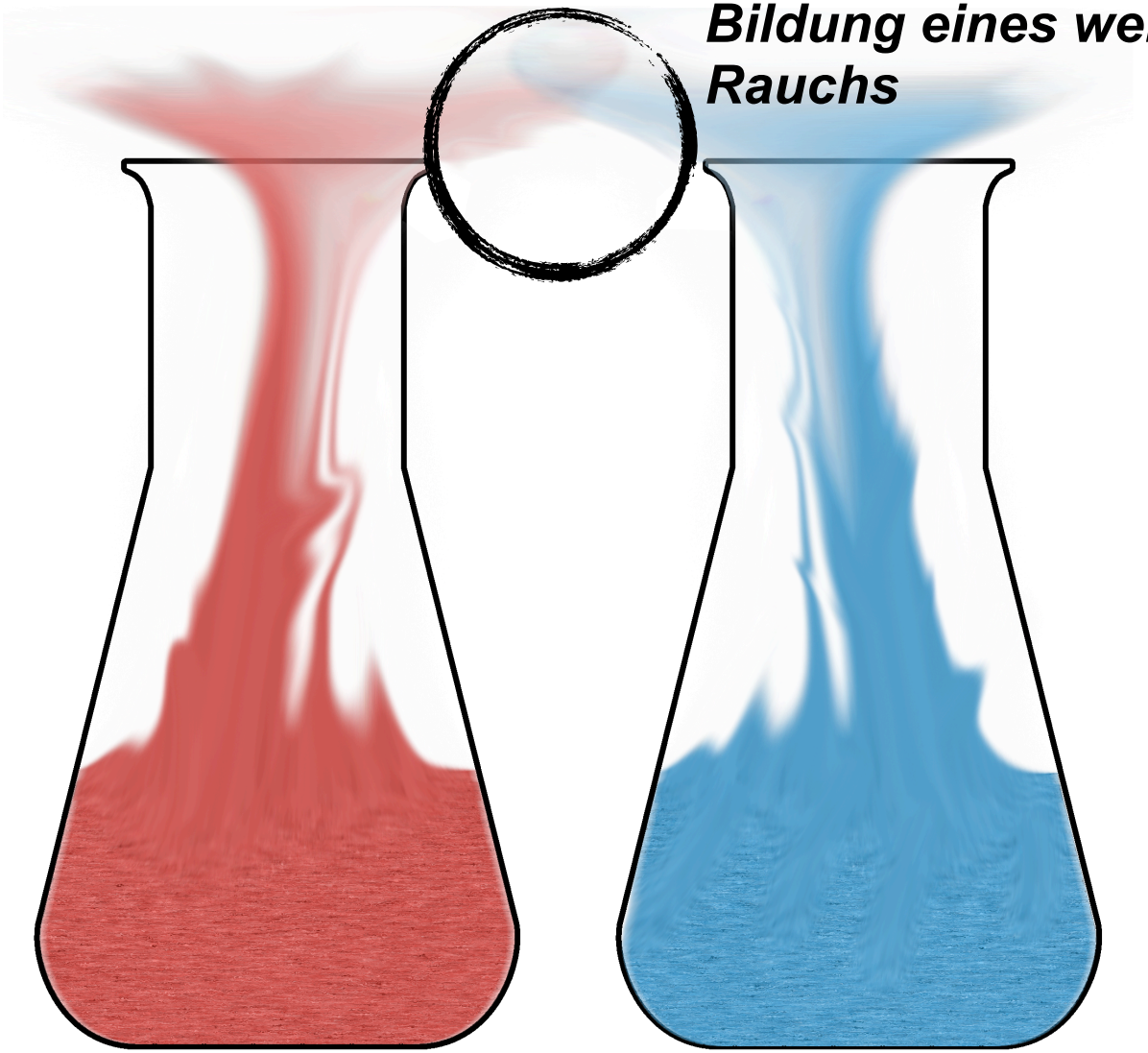
Säuren und Basen



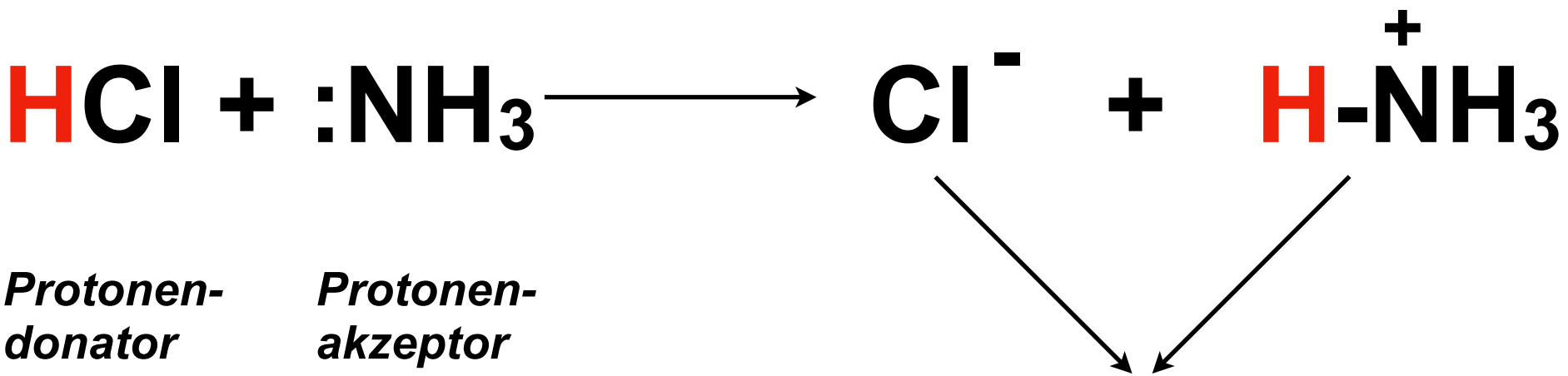
Säure =
Protonendonator

Base =
Protonenakzeptor

Versuch mit Ammoniak und Salzsäure



Versuch mit Ammoniak und Salzsäure



Protonen-donator ***Protonen-akzeptor***

NH_4Cl

Ammoniumchlorid, ein Salz

Eine Protolyse!