

**Source:** [\[KB20200823182634\]](#)

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Others: [\[KB20200825153500\]](#) - Exr0n

Free associate: atoms, 2nd law of thermodynamics, energy, electronegativity, polarity, types of chemical bonds, lipid(s), carbohydrate(s), protein(s), amino acid(s), fold, enzyme.

Never done a free associate before, so lets see how this goes.

- Atoms
  - Exhibit electronegativity, which allows them to
  - Form molecules, which exhibits the property of polarity
  - Depending upon polarity, different types of bonds can be formed.
  - Covalent bonds are the bonds which peptides exhibit, the bond which joins amino acids, which form proteins when chained together.
  - These proteins then fold, and the way they fold is critical to their function.
  - Some of these functions are turning carbohydrates into ATP.
  - ATP is biological energy (along with some lipids which form fats), which is fundamental for reactions to occur.
  - A way of lowering the activation energy for reactions to take place is with enzymes.
  - This increases reaction rate, just like heat does.
  - Each of these reactions contributes to the inevitable heat death of the universe, due to the second law of thermodynamics
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\*\*\*\*2nd law of thermodynamics

\*\*\*\*Energy

\*\*\*\*Electronegativity

\*\*\*\*Polarity

\*\*\*\*Types of chemical bonds

\*\*\*\*Lipids

\*\*\*\*Carbohydrates

\*\*\*\*Protein

\*\*\*\*Amino acids

\*\*\*\*fold

\*\*\*\*enzyme