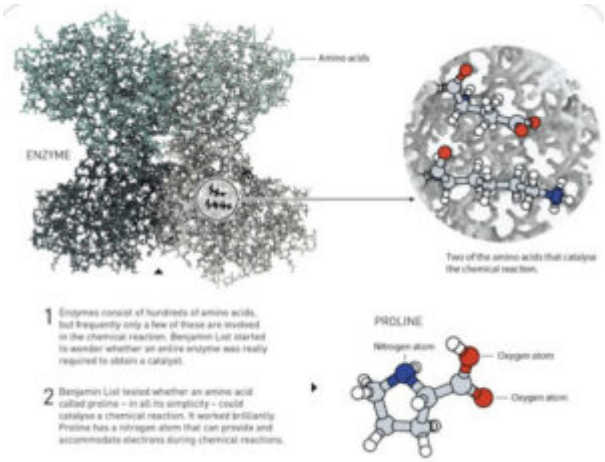
Chemistry Nobel 2021

October 7, 2021

In news- The 2021 Nobel Prize in Chemistry was awarded to **German scientist Benjamin List and Scotland-born scientist David WC MacMillan** "for the development of asymmetric organocatalysis."

About the research-

- They developed a **new and ingenious tool for molecule building- organocatalysis.**
- Researchers long believed that there were just two types of catalysts available: metals and enzymes.
- Independently of each other, laureates Benjamin List and David MacMillan developed a **third type – asymmetric organocatalysis – which builds upon small organic molecules.**



- Organic catalysts have a stable framework of carbon atoms and more active chemical groups can be attached to them.
- They contain elements such as oxygen, nitrogen, sulphur or phosphorus, meaning that they are both environmentally friendly and cheap to produce.
- The increased use of organic catalysts is due to their ability to drive asymmetric catalysis.

- Whenever molecules are being built, two different molecules can form and chemists would want to use any one of them when producing pharmaceuticals.
- Both Benjamin List and David MacMillan have demonstrated how **organic catalysts can be used to drive multitudes of chemical reactions.**
- With the help of these reactions, chemists can now produce anything ranging from new pharmaceuticals to molecules that can capture light in solar cells.