Archives in Chemical Research
ISSN: 2572-4657

Open access Opinion

The Major Importance of the Organic Chemistry and its Applications

Shaik Jahud Khan*

Department of Chemical Engineering, University of Kashan, Iran

INTRODUCTION

Given that the realm of natural science was once restricted to intensities produced by live life forms, the word "organic" was born. This was attributed to the "life energy" that only living substances possessed, which inanimate objects lacked. The aforementioned notion was disproven when Urey Miller produced urea from inorganic components, although the categorization is still in use today. Organic chemistry is the study of the composition, characteristics, and interactions of organic molecules having carbon-containing covalent bonds.

DESCRIPTION

The analysis of their structure exposes their chemical make-up and formula, whilst the analysis of their physical and chemical characteristics and chemical reactivity discloses their behavior. Examples of organic reaction research include studying individual organic molecules in the lab and theoretically (in silico), as well as the chemical synthesis of drugs, natural products, and polymers. Organic chemistry is a wide field of study because of a key characteristic shown by the atom carbon, carbon catenation. Because of its extraordinary ability to make incredibly stable bonds with other carbon atoms, carbon is able to construct stable molecules with relatively complicated structures. Catenation is the process by which an element forms bonds with atoms of the same type. This characteristic of carbon is therefore responsible for the development of organic chemistry.

Organic chemistry is a branch of chemistry that deals with the structure, characteristics, and reactions of organic molecules and organic materials, which are any forms of matter that contain carbon atoms. Their analysis of structure yields their structural formula. The study of properties includes both physical and chemical qualities as well as the assessment of chemical reactivity to understand their behaviour. Examples of organic reaction research include studying individual organic compounds in the lab and conceptually (in silico), as well as the chemical synthesis of pharmaceuticals, natural products, and polymers. Organic substances are everywhere around us. Many contemporary materials contain organic chemicals, at least in part. They are crucial to the development of the economy, as well as to biochemistry, biotechnology, and medicine. Organic compounds can be found in a variety of products, including agrichemicals, coatings, cosmetics, detergent, dyes, food, fuel, petrochemicals, pharmaceuticals, plastics, and rubber. Among the substances investigated in organic chemistry are hydrocarbons (molecules made only of carbon and hydrogen) and carbon-based compounds that also contain other elements, including oxygen, nitrogen, sulphur, phosphorus (present in many bio-chemicals), and halogens. Organometallic chemistry is the study of carbon-metal bonding in molecules. Modern organic chemistry research also focuses on other organometallics, such as the lanthanides and transition metals like zinc, copper, palladium, nickel, cobalt, titanium, and chromium.

CONCLUSION

All life on Earth is based on organic compounds, which make up the majority of substances that are now understood. Organic compounds have a vast range of structural choices and potential applications due to the 4-valent bonding patterns of carbon, which include conventional single, double, and triple bonds as well as configurations with delocalized electrons. They are used in or present in a wide range of commercial items, including pharmaceuticals, polymers, combustibles, and fuels as well as lubricants and solvents made from petrochemicals and agrichemicals. Subfields of organic chemistry include biochemistry, pharmaceutical chemistry, polymer chemistry, materials science, and organometallic chemistry.

ACKNOWLEDGEMENT

None

CONFLICT OF INTEREST

Authors declare no conflict of interest

Received:	03-October-2022	**Manuscript No:**	IPACRH-22-15173
Editor assigned:	05-October-2022	**PreQC No:**	IPACRH-22-15173 (PQ)
Reviewed:	19-October-2022	**QC No:**	IPACRH-22-15173
Revised:	24-October-2022	**Manuscript No:**	IPACRH-22-15173 (R)
Published:	31-October-2022	**DOI:**	10.21767/2572-4657.6.5.23

Corresponding author Shaik Jahud Khan, Department of Chemical Engineering, University of Kashan, Iran, E-mail: khan_j12858@gmail.com

Citation Khan SJ (2022) The Major Importance of the Organic Chemistry and its Applications. Arch Chem Res. 6:23.