

Historical Milestones in Organic Chemistry

Organic Chemistry · Answer Key · 10 Questions

1. Which scientist is credited with the 1828 synthesis of urea from ammonium cyanate, effectively challenging the theory of vitalism?

A) Friedrich Wöhler

B) Antoine Lavoisier

C) Dmitri Mendeleev

D) John Dalton

2. August Kekulé proposed the cyclic structure of benzene in 1865, famously claiming the idea came to him in a dream about what?

A) A snake biting its own tail

B) A spinning wheel

C) A honeycomb structure

D) A hexagonal crystal

3. Who was awarded the 1902 Nobel Prize in Chemistry for his work on sugar and purine syntheses?

A) Emil Fischer

B) Louis Pasteur

C) Robert Robinson

D) Linus Pauling

4. In 1856, William Henry Perkin accidentally discovered the first synthetic organic dye, known as what?

A) Mauveine

B) Indigo

C) Alizarin

D) Prussian blue

5. Which chemist established the concept of stereochemistry by demonstrating that tartaric acid exists in different optical isomers?

A) Louis Pasteur

B) Jacobus Henricus van 't Hoff

C) Gilbert N. Lewis

D) Alfred Werner

6. The Woodward-Hoffmann rules, which explain the conservation of orbital symmetry in chemical reactions, were developed in the mid-1960s by Robert Burns Woodward and whom?

A) Roald Hoffmann

- B) Linus Pauling
- C) Francis Crick
- D) Peter Debye

7. In 1930, Wallace Carothers, working at DuPont, led the research team that successfully synthesized which major polymer?

A) Neoprene

- B) Polyethylene
- C) Polystyrene
- D) Teflon

8. Which scientist developed the method of combustion analysis in the early 19th century, allowing for the determination of the elemental composition of organic compounds?

A) Justus von Liebig

- B) Robert Boyle
- C) Henry Cavendish
- D) Joseph Priestley

9. The Cahn-Ingold-Prelog priority rules are used in organic chemistry to specify what?

A) The configuration of stereocenters

- B) The acidity of carboxylic acids
- C) The electronegativity of functional groups
- D) The boiling point of alkanes

10. Who coined the term 'organic chemistry' in 1807 to describe the chemistry of substances derived from living organisms?

A) Jöns Jacob Berzelius

- B) Dmitri Mendeleev
- C) Stanislao Cannizzaro
- D) August Wilhelm von Hofmann