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Operating instructions



The unit complies
with the correspond-
ing EC guidelines

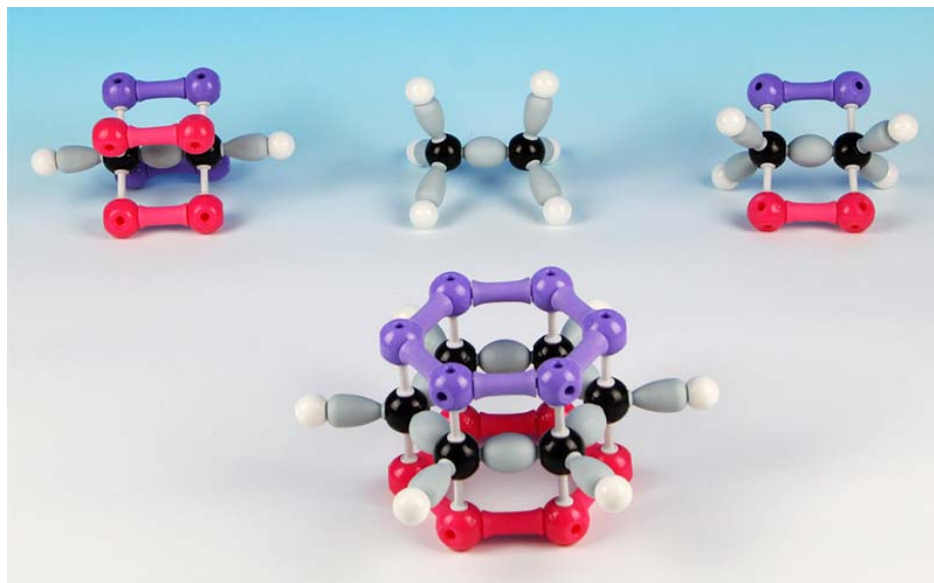


Fig. 1: 39837-01 Student molecular orbital model set, 4 organic models

Function and Applications

The kit includes all the parts to build up 4 molecular orbital models of the following organic compounds: benzene (C_6H_6), ethane (C_2H_6), ethylene (C_2H_4 , ethene), and acetylene (C_2H_2 , ethyne).

Benefits

The models show bonding s- and p-orbitals. The concept of hybridization and delocalization can be demonstrated as well.

Acetylene- C_2H_2					
Atoms	Holes (Angle)	Color	Dia. (mm)	Qty.	Drawing
H-Hydrogen	2(180°)	White	17	2	
C-Carbon	6(90°)	Black	23	2	
$\pi(Pi)$ Atom 1	5($120^\circ/90^\circ$)	Pink	23	4	
$\pi(Pi)$ Atom 2	5($120^\circ/90^\circ$)	Purple	23	4	
Links		Color	Length (mm)	Qty.	Drawing
$\sigma(Sigma)$ bond 1		Grey	38	1	
$\sigma(Sigma)$ bond 2		Grey	38	2	
$\pi(Pi)$ bond 1		Pink	38	2	
$\pi(Pi)$ bond 2		Purple	38	2	
Medium (single, rigid)		Grey white	44	8	

Ethylene -C ₂ H ₄					
Atoms	Holes (Angle)	Color	Dia. (mm)	Qty.	Drawing
H-Hydrogen	1	White	17	4	
C-Carbon	5(120°/90°)	Black	23	2	
π(Pi) Atom 1	5(120°/90°)	Pink	23	2	
π(Pi) Atom 2	5(120°/90°)	Purple	23	2	
Links		Color	Length (mm)	Qty.	Drawing
σ(Sigma) bond 1		Grey	38	1	
σ(Sigma) bond 2		Grey	38	4	
π(Pi) bond 1		Pink	38	1	
π(Pi) bond 2		Purple	38	1	
Medium (single, rigid)		Grey White	44	4	

Ethane -C ₂ H ₆					
Atoms	Holes (Angle)	Color	Dia. (mm)	Qty.	Drawing
H-Hydrogen	1	White	17	6	
C-Carbon	4(109°28')	Black	23	2	
Links		Color	Length (mm)	Qty.	Drawing
σ(Sigma) bond 1		Grey	38	1	
σ(Sigma) bond 2		Grey	38	6	

Benzene -C ₆ H ₆					
Atoms	Holes (Angle)	Color	Dia. (mm)	Qty.	Drawing
H-Hydrogen	1	White	17	6	
C-Carbon	5(120°/90°)	Black	23	6	
π(Pi) Atom 1	5(120°/90°)	Pink	23	6	
π(Pi) Atom 2	5(120°/90°)	Purple	23	6	
Links		Color	Length (mm)	Qty.	Drawing
σ(Sigma) bond 1		Grey	38	6	
σ(Sigma) bond 2		Grey	38	6	
π(Pi) bond 1		Pink	38	6	
π(Pi) bond 2		Purple	38	6	
Medium (single, rigid)		Grey White	44	12	