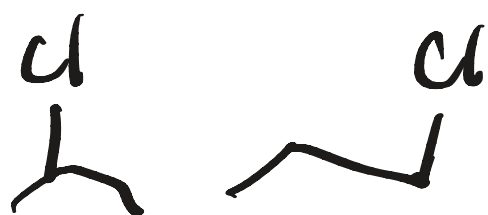
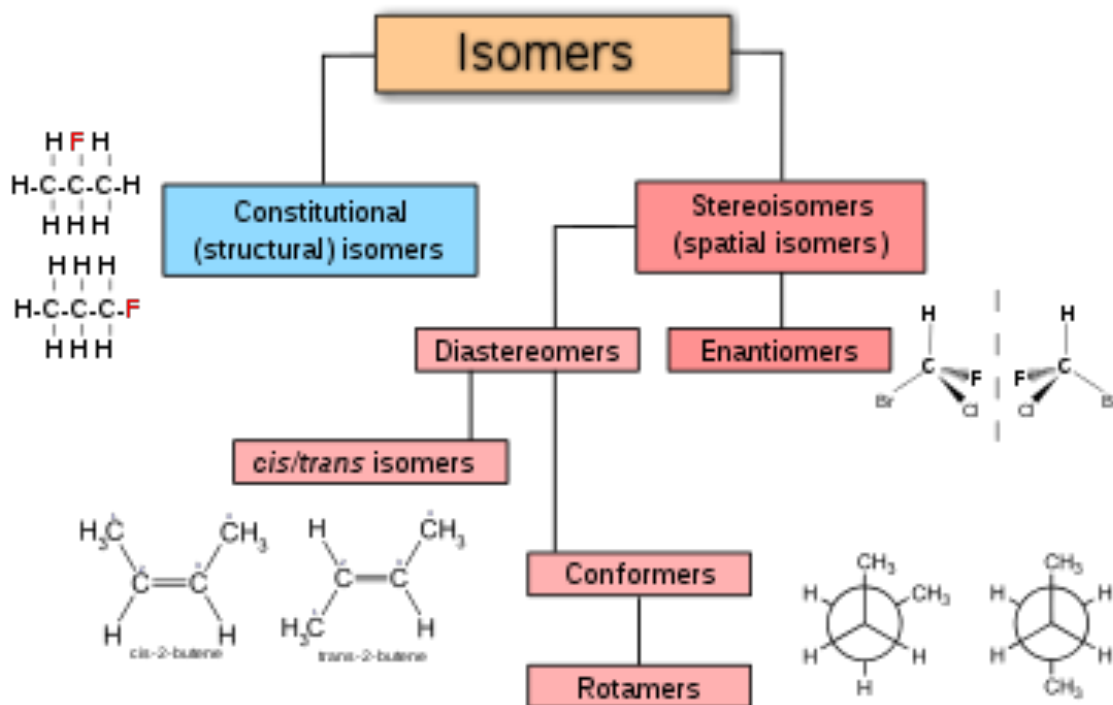


Stereochemistry

220C

10/5/20



enantiomers

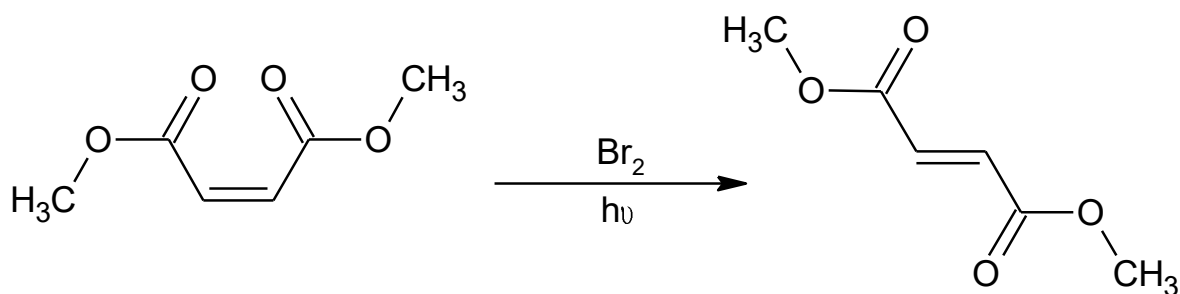
NON-SUPERIMPOS.

Mirror image

diastereomers

NON-SUPERIMPOS

NON-MIRROR IMAGE



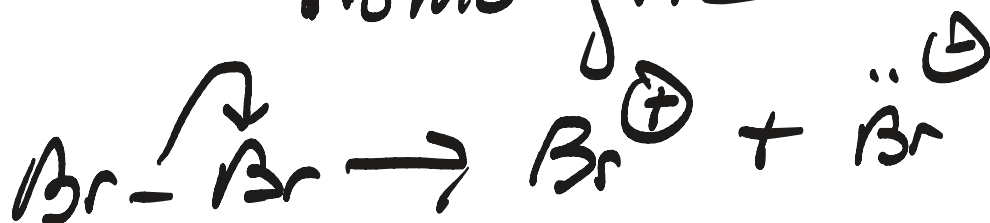
Big Picture

$$E = h\nu$$

DMM, Br_2 , Light



homolytic



heterolytic

ΔH° at 25°C

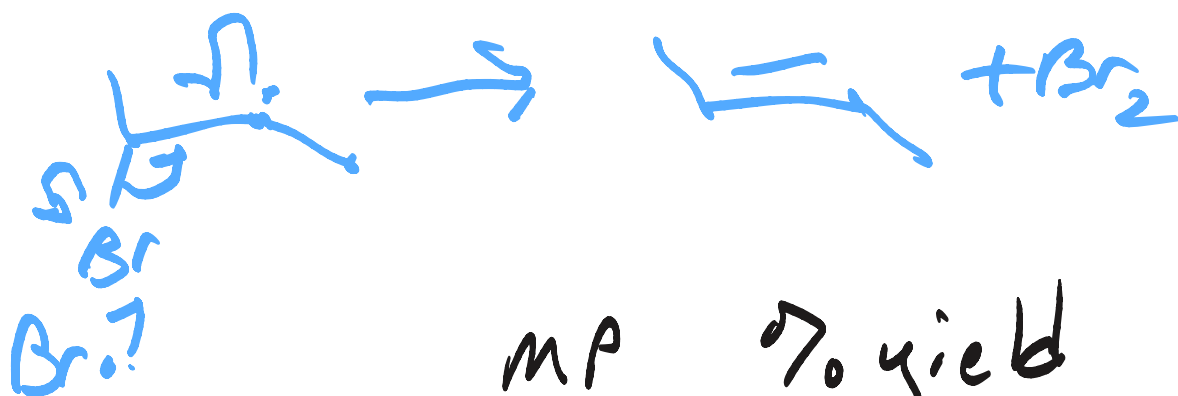
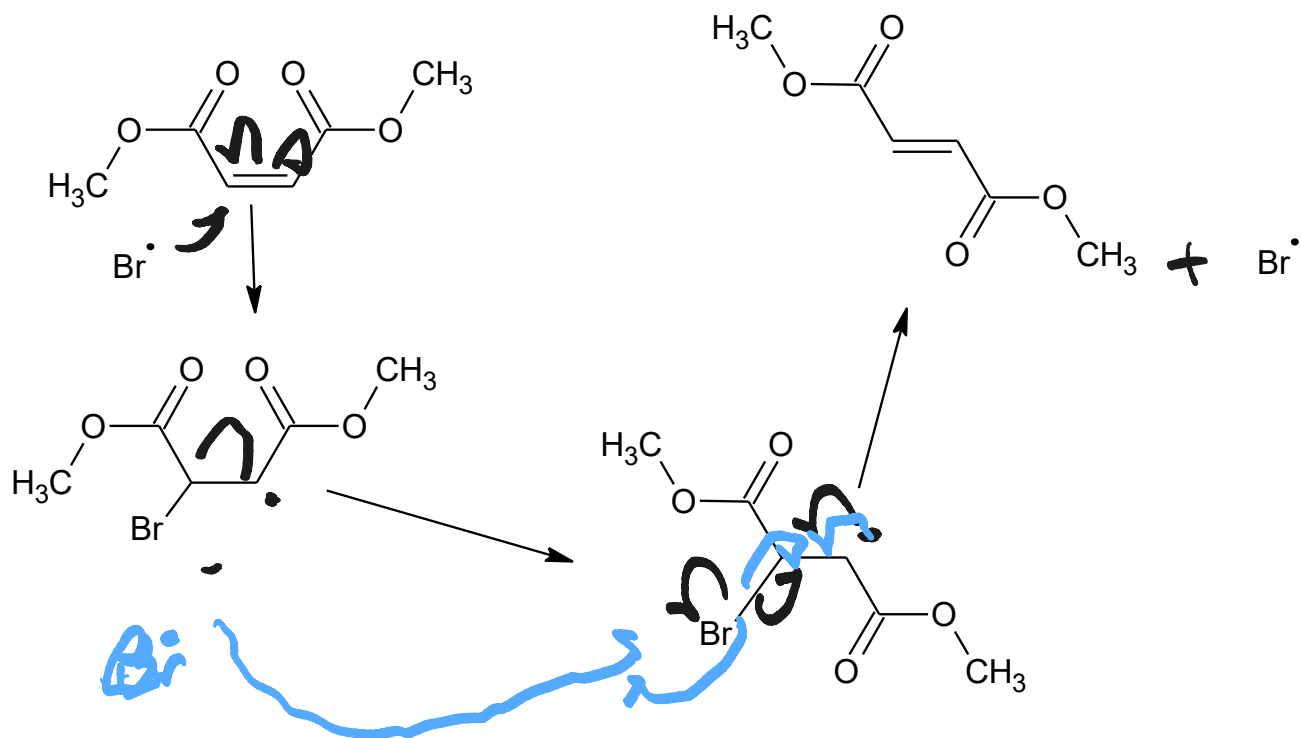
Polyatomic Molecules		
	kcal/mol	kJ/mol
C—H	99	414
C—C	<u>83</u>	347
C=C	<u>146</u>	610
C≡C	200	836
C—O	86	359
C=O ¹	192	803
C=O ²	166	694
C=O ³	176	736
C=O ⁴	179	748
C—N	73	305
C=N	147	615
C≡N	213	890
C—F	116	485
C—Cl	81	339
C—Br	68	284
C—I	51	213
O—H	111	464
O—O	35	146
O—Cl	52	217

TABLE 27-1 Energies Associated with the Wavelength of Light Absorbed

λ , nm	Energy	
	kcal/mol	kJ/mol
200	143.0	598
250	114.4	479
300	95.3	399
<u>350</u>	81.7	342
<u>400</u>	71.5	299
450	63.5	266
500	57.2	239
550	52.0	218
<u>600</u>	<u>47.7</u>	200
650	44.0	184
700	40.8	171

TABLE 2-4 Average Bond Energies

Diatomic Molecules		
	kcal/mol	kJ/mol
H—H	104.2	436
F—F	37.5	157
Cl—Cl	58.0	243
Br—Br	<u>46.3</u>	194
I—I	36.5	153



$$\frac{\text{actual (g)}}{\text{expected (g)}} \times 100$$

$$0.5 \text{ g DMM} \quad (\text{g/mol}) = \text{g DMM}$$

$$\frac{\text{g DMM}}{\text{MW DMM} (\text{g/mol})} = \text{mol DMM}$$

$$\text{mol DMM} \left(\frac{1 \text{ mol DMF}}{1 \text{ mol DMM}} \right) = \text{mol DMF}$$

$$\text{mol DMF} \times \text{MW DMF} (\text{g/mol}) = \text{g DMF}$$

good 65%
30-50