

教材中涉及到的有机化合物的命名汇总

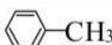
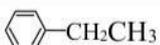
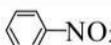
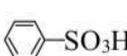
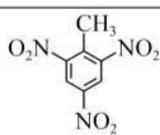
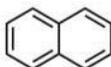
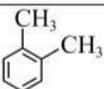
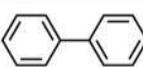
1. 烷烃、环烷烃

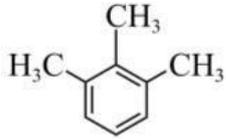
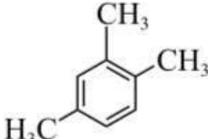
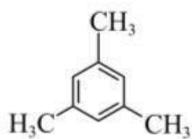
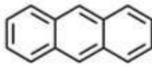
结构	$\text{CH}_3\text{—CH}_2\text{—CH}_2\text{—CH}_3$	$\begin{array}{c} \text{CH}_3\text{—CH—CH}_3 \\ \\ \text{CH}_3 \end{array}$	$\text{CH}_3\text{—CH}_2\text{—CH}_2\text{—CH}_2\text{—CH}_3$	$\begin{array}{c} \text{CH}_3\text{—CH—CH}_2\text{—CH}_3 \\ \\ \text{CH}_3 \end{array}$
名称	正丁烷/丁烷	异丁烷/2-甲基丙烷	正戊烷/戊烷	异戊烷/2-甲基丁烷
结构	$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{—C—CH}_3 \\ \\ \text{CH}_3 \end{array}$	$\begin{array}{c} \text{CH}_3\text{—CH—CH}_2\text{—CH}_2\text{—CH—CH}_3 \\ \qquad \qquad \\ \text{CH}_3 \qquad \qquad \text{CH}_3 \end{array}$		$\begin{array}{c} \text{CH}_3\text{CH}_3 \\ \quad \\ \text{CH}_3\text{—C—C—CH}_3 \\ \quad \\ \text{CH}_3\text{CH}_3 \end{array}$
名称	新戊烷/ 2,2-二甲基丙烷	2,4-二甲基己烷		2,2,3,3-四甲基丁烷
结构	$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{—CH—C—CH}_2\text{—CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$	$\begin{array}{c} \text{CH}_3\text{CH—CHCH}_2\text{CH}_2\text{CH}_3 \\ \quad \\ \text{CH}_3 \quad \text{CH}_3 \end{array}$	$\begin{array}{c} \text{CH}_3 \\ \\ \text{CH}_3\text{CH—CH—C—CH}_2\text{CH}_3 \\ \quad \quad \\ \text{CH}_3 \quad \text{CH}_3 \quad \text{CH}_3 \end{array}$	
名称	2,3,3-三甲基戊烷	2,3-二甲基己烷	2,3,4,4-四甲基己烷	环戊烷/环己烷

2. 烯烃、炔烃

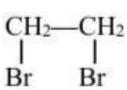
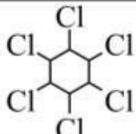
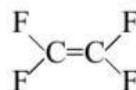
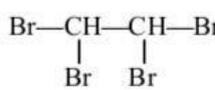
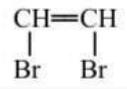
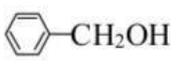
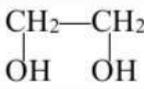
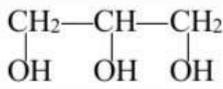
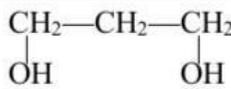
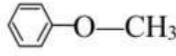
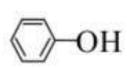
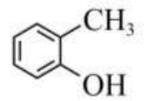
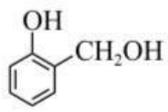
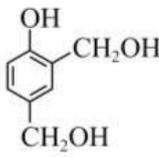
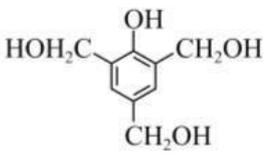
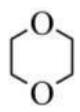
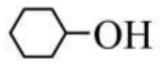
结构	$\text{CH}_2=\text{CHCH}_2\text{CH}_3$	$\text{CH}_2=\text{CHCH}_2\text{CH}_2\text{CH}_3$	$\begin{array}{c} \text{CH}_2=\text{C—CH}_3 \\ \\ \text{CH}_3 \end{array}$	$\begin{array}{c} \text{CH}=\text{CH}_2 \\ \\ \text{Cl} \end{array}$
名称	1-丁烯	1-戊烯	异丁烯/2-甲基丙烯	氯乙烯
结构	$\begin{array}{c} \text{H}_3\text{C} \quad \text{CH}_3 \\ \diagdown \quad / \\ \text{C}=\text{C} \\ / \quad \diagdown \\ \text{H} \quad \text{H} \end{array}$	$\begin{array}{c} \text{H}_3\text{C} \quad \text{H} \\ \diagdown \quad / \\ \text{C}=\text{C} \\ / \quad \diagdown \\ \text{H} \quad \text{CH}_3 \end{array}$	$\text{CH}_2=\text{CH—CH}=\text{CH}_2$	$\begin{array}{c} \text{CH}_2=\text{C—CH}=\text{CH}_2 \\ \\ \text{CH}_3 \end{array}$
名称	顺-2-丁烯	反-2-丁烯	1,3-丁二烯	异戊二烯
结构	$\begin{array}{c} \text{CH}_2=\text{CH—CH—CH}_2\text{—CH}_3 \\ \\ \text{CH}_3 \end{array}$	$\text{CH}_3\text{—} \langle \text{C}_6\text{H}_4 \rangle \text{—CH}=\text{CH}_2$	$\begin{array}{c} \text{CH}\equiv\text{C—CH—CH}_3 \\ \\ \text{CH}_3 \end{array}$	
名称	3-甲基-1-戊烯	4-甲基苯乙烯	3-甲基-1-丁炔	

3. 芳香族

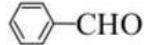
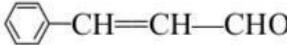
结构				
名称	甲苯	乙苯	溴苯	硝基苯
结构				
名称	苯磺酸	氯化苄	2,4,6-三硝基甲苯/TNT	萘
结构			$\text{H}_3\text{C—} \langle \text{C}_6\text{H}_4 \rangle \text{—CH}_3$	
名称	邻二甲苯/1,2-二甲苯	间二甲苯/1,3-二甲苯	对二甲苯/1,4-二甲苯	联苯

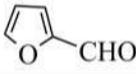
结构				
名称	连三甲苯/1,2,3-三甲苯	偏三甲苯/1,2,4-三甲苯	均三甲苯/1,3,5-三甲苯	蒽

4. 卤代烃、醇、醚、酚

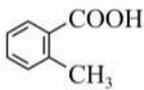
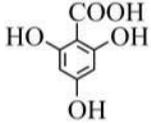
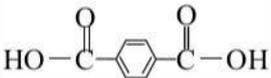
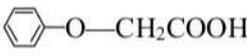
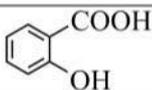
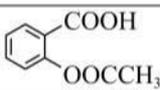
结构	CH_3Cl	$\text{CH}_3\text{CH}_2\text{Br}$	$\text{CH}_3-\text{CH}_2-\underset{\text{Cl}}{\text{CH}}-\text{CH}_3$	$\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{Cl}$
名称	氯甲烷	溴乙烷	2-氯丁烷	1-氯戊烷
结构				
名称	1,2-二溴乙烷	六氯环己烷(六六六)	四氟乙烯	1,1,2,2-四溴乙烷
结构		$\text{CH}_3\text{CH}_2\text{OH}$	$\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$	$\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_3$ OH
名称	1,2-二溴乙烯	乙醇	正丙醇/1-丙醇	正戊醇
结构	$\text{CH}_3-\underset{\text{OH}}{\text{CH}}-\text{CH}_3$			
名称	2-丙醇/异丙醇	苯甲醇	乙二醇	丙三醇(甘油)
结构		CH_3OCH_3	$\text{C}_2\text{H}_5-\text{O}-\text{C}_2\text{H}_5$	
名称	1,3-丙二醇	二甲醚/甲醚	乙醚	苯甲醚
结构				
名称	苯酚	邻甲基苯酚	2,4,6-三溴苯酚	2-羟甲基苯酚
结构				
名称	2,4-二羟甲基苯酚	2,4,6-三羟甲基苯酚	二噁烷/1,4-二氧六环	环己醇

5. 醛酮

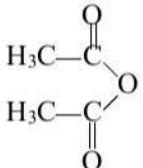
结构	HCHO	CH_3CHO		
名称	甲醛(蚁醛)	乙醛	苯甲醛	肉桂醛
结构	$\text{CH}_3-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}_3$	$\text{CH}_3-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}_2-\text{CH}_3$	$\text{CH}_3\text{CH}_2\overset{\text{O}}{\parallel}{\text{C}}\text{CH}_2\text{CH}_2\text{CH}_3$	$\text{CH}_2=\text{CH}-\text{CN}$

名称	丙酮	2-丁酮/丁酮/甲乙酮	3-己酮	丙烯腈
结构	$\text{CH}_3-\text{CH}(\text{OH})-\text{CN}$		$\text{Cl}-\text{C}(=\text{O})-\text{Cl}$	
名称	2-羟基丙腈	糠醛	碳酰氯(光气)	

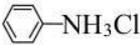
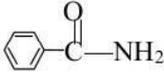
6. 羧酸

结构	HCOOH	CH ₃ COOH	CH ₃ CH ₂ COOH	CH ₃ CH ₂ CH ₂ COOH
名称	甲酸(蚁酸)	乙酸	丙酸	正丁酸
结构	CH ₂ =CHCOOH			
名称	丙烯酸	苯甲酸	邻甲基苯甲酸	没食子酸
结构	C ₁₇ H ₃₅ COOH	C ₁₅ H ₃₁ COOH	C ₁₇ H ₃₃ COOH	C ₁₇ H ₃₁ COOH
名称	硬脂酸(十八酸)	软脂酸	油酸	亚油酸
结构	$\begin{array}{c} \text{COOH} \\ \\ \text{COOH} \end{array}$	$\text{CH}_3-\text{CH}(\text{OH})-\text{COOH}$	$\text{CH}_3\text{CH}(\text{OH})\text{CH}_2\text{COOH}$	$\begin{array}{c} \text{CH}_2\text{COOH} \\ \\ \text{HO}-\text{C}-\text{COOH} \\ \\ \text{CH}_2\text{COOH} \end{array}$
名称	乙二酸(草酸)	乳酸(2-羟基丙酸)	3-羟基丁酸	柠檬酸
结构	$\begin{array}{c} \text{CH}_2\text{COOH} \\ \\ \text{CH}_2\text{CH}_2\text{COOH} \end{array}$	$\begin{array}{c} \text{CH}_2\text{CH}_2\text{COOH} \\ \\ \text{CH}_2\text{CH}_2\text{COOH} \end{array}$		$\begin{array}{c} \text{CH}_2\text{CH}_2\text{COOH} \\ \\ \text{CH}_2\text{CH}_2\text{CH}_2\text{OH} \end{array}$
名称	戊二酸	己二酸	对苯二甲酸	6-羟基己酸
结构				
名称	苯氧乙酸	水杨酸	乙酰水杨酸	

7. 酯类

结构	$\text{CH}_3\text{C}(=\text{O})\text{OC}_2\text{H}_5$	$\text{CH}_3\text{C}(=\text{O})\text{OCH}=\text{CH}_2$	$\text{CH}_3\text{CH}_2\text{CH}_2\text{C}(=\text{O})\text{OC}_2\text{H}_5$	$\text{CH}_3(\text{CH}_2)_3\text{C}(=\text{O})\text{O}(\text{CH}_2)_4\text{CH}_3$
名称	乙酸乙酯	乙酸乙烯酯	丁酸乙酯(菠萝)	戊酸戊酯(苹果)
结构	$\text{CH}_3\text{C}(=\text{O})\text{OCH}_2\text{CH}_2\text{CH}(\text{CH}_3)\text{CH}_3$		$\begin{array}{c} \text{COOC}_2\text{H}_5 \\ \\ \text{COOC}_2\text{H}_5 \end{array}$	$\text{CH}_3-\text{O}-\text{C}(=\text{O})-\text{O}-\text{CH}_3$
名称	乙酸异戊酯(香蕉)	苯甲酸苯甲酯	乙二酸二乙酯	碳酸二甲酯
结构	$\begin{array}{c} \text{C}_{17}\text{H}_{35}\text{COO}-\text{CH}_2 \\ \\ \text{C}_{17}\text{H}_{35}\text{COO}-\text{CH} \\ \\ \text{C}_{17}\text{H}_{35}\text{COO}-\text{CH}_2 \end{array}$	$\begin{array}{c} \text{C}_{17}\text{H}_{33}\text{COO}-\text{CH}_2 \\ \\ \text{C}_{17}\text{H}_{33}\text{COO}-\text{CH} \\ \\ \text{C}_{17}\text{H}_{33}\text{COO}-\text{CH}_2 \end{array}$	$\begin{array}{c} \text{CH}_2-\text{O}-\text{NO}_2 \\ \\ \text{CH}-\text{O}-\text{NO}_2 \\ \\ \text{CH}_2-\text{O}-\text{NO}_2 \end{array}$	
名称	硬脂酸甘油酯	油酸甘油酯	硝化甘油/三硝酸甘油酯	乙酸酐

8. 胺、酰胺、氨基酸

结构	$\text{CH}_3\text{—NH}_2$			$\text{CH}_3\text{—}\overset{\text{O}}{\parallel}{\text{C}}\text{—NH}_2$
名称	甲胺	苯胺	苯胺盐酸盐	乙酰胺
结构	$\text{CH}_2\text{=CH—}\overset{\text{O}}{\parallel}{\text{C}}\text{—NH}_2$		$\text{H—}\overset{\text{O}}{\parallel}{\text{C}}\text{—N(CH}_3)_2$	$\text{CH}_3\text{O—}\langle\text{C}_6\text{H}_4\rangle\text{—NH—}\overset{\text{O}}{\parallel}{\text{C}}\text{—CH}_3$
名称	丙烯酰胺	苯甲酰胺	N,N-二甲基甲酰胺	对甲氧基乙酰苯胺
结构	$\text{CH}_3\text{—}\overset{\text{O}}{\parallel}{\text{C}}\text{—NH—CH}_3$	$\begin{array}{c} \text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2 \\ \\ \text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2 \end{array}$	$\text{H}_2\text{N—}\langle\text{C}_6\text{H}_4\rangle\text{—NH}_2$	$\text{H}_2\text{N—}\overset{\text{O}}{\parallel}{\text{C}}\text{—NH}_2$
名称	N-甲基乙酰胺	己二胺	对苯二胺	尿素
结构	$\begin{array}{c} \text{O} \\ \parallel \\ \text{CH}_2\text{—C—OH} \\ \\ \text{NH}_2 \end{array}$	$\begin{array}{c} \text{O} \\ \parallel \\ \text{CH}_3\text{—CH—C—OH} \\ \\ \text{NH}_2 \end{array}$	$\text{HOOCCH}_2\text{CH}_2\text{CH}_2\text{CH}(\text{NH}_2)\text{COOH}$	$\langle\text{C}_6\text{H}_5\rangle\text{—CH}_2\text{—}\begin{array}{c} \text{O} \\ \parallel \\ \text{CH—COOH} \\ \\ \text{NH}_2 \end{array}$
名称	甘氨酸/氨基乙酸	丙氨酸/2-氨基丙酸	谷氨酸 2-氨基戊二酸	苯丙氨酸/ 2-氨基-3-苯基丙酸

9. 糖类

结构	$\text{C}_6\text{H}_{12}\text{O}_6$	$\text{C}_6\text{H}_{12}\text{O}_6$	$\text{C}_{12}\text{H}_{22}\text{O}_{11}$	$(\text{C}_6\text{H}_{10}\text{O}_5)_n$
名称	葡萄糖(多羟基醛)	果糖(多羟基酮)	蔗糖、麦芽糖分子式	淀粉、纤维素分子式
结构	$\text{C}_5\text{H}_{10}\text{O}_5$	$\text{C}_5\text{H}_{10}\text{O}_4$	$\begin{array}{c} \text{CH}_2\text{—CH—CHO} \\ \quad \\ \text{OH} \quad \text{OH} \end{array}$	$\begin{array}{c} \text{CH}_2\text{—CH—CH—CH—CH}_2 \\ \quad \quad \quad \quad \\ \text{OH} \quad \text{OH} \quad \text{OH} \quad \text{OH} \quad \text{OH} \end{array}$
名称	核糖	脱氧核糖	丙醛糖/甘油醛	木糖醇

10. 高分子类

结构	$\text{—[CH}_2\text{—CH}_2\text{]}_n\text{—}$	$\text{—[CH}_2\text{—}\langle\text{C}_6\text{H}_4\rangle\text{]}_n\text{—}$	$\text{—[CH}_2\text{—CH]}_n\text{—}$ Cl
名称	聚乙烯	聚苯乙烯	聚氯乙烯
结构	$\text{—[CF}_2\text{—CF}_2\text{]}_n\text{—}$	$\text{—[CH=CH]}_n\text{—}$	$\text{—[CH}_2\text{—CH]}_n\text{—}$ CH ₃
名称	聚四氟乙烯/塑料王	聚乙炔	聚丙烯/丙纶
结构	$\text{—[CH}_2\text{—CH]}_n\text{—}$ CN	$\text{—[CH}_2\text{—CH]}_n\text{—}$ COOH	$\text{—[CH}_2\text{—CH]}_n\text{—}$ COONa
名称	聚丙烯腈/腈纶	聚丙烯酸	聚丙烯酸钠
结构	$\text{—[CH}_2\text{—}\overset{\text{Cl}}{\underset{ }{\text{C}}}\text{=CH—CH}_2\text{]}_n\text{—}$	$\text{—[}\langle\text{C}_6\text{H}_4\rangle\text{CH}_2\text{CH}_2\text{CH=CHCH}_2\text{]}_n\text{—}$	$\text{—[}\begin{array}{c} \text{H}_2\text{C} \quad \text{CH}_2 \\ \quad \\ \text{C}=\text{C} \\ \quad \\ \text{H} \quad \text{H} \end{array}\text{]}_n\text{—}$
名称	氯丁橡胶/聚-2-氯-1,3-丁二烯	丁苯橡胶	顺丁橡胶/顺式聚-1,3-丁二烯

结构	$\left[\text{CH}_2 - \underset{\text{CH}_3}{\text{C}} = \text{CH} - \text{CH}_2 \right]_n$	$\left[\begin{array}{c} \text{H}_2\text{C} \quad \text{CH}_2 \\ \diagdown \quad / \\ \text{C} = \text{C} \\ / \quad \diagdown \\ \text{H}_3\text{C} \quad \text{H} \end{array} \right]_n$	$\left[\begin{array}{c} \text{H}_2\text{C} \quad \text{H} \\ \diagdown \quad / \\ \text{C} = \text{C} \\ / \quad \diagdown \\ \text{H}_3\text{C} \quad \text{CH}_2 \end{array} \right]_n$
名称	聚异戊二烯 聚-2-甲基-1,3-丁二烯	天然橡胶/顺式聚异戊二烯	杜仲胶/反式聚异戊二烯
结构	$\left[\text{CH}_2 - \underset{\text{COOCH}_3}{\overset{\text{CH}_3}{\text{C}}} \right]_n$	$\text{HO} - \overset{\text{O}}{\parallel}{\text{C}} - (\text{CH}_2)_4 - \overset{\text{O}}{\parallel}{\text{C}} - \text{OCH}_2\text{CH}_2\text{O} - \left[\text{H} \right]_n$	$\text{HO} - \overset{\text{O}}{\parallel}{\text{C}} - \text{C}_6\text{H}_4 - \overset{\text{O}}{\parallel}{\text{C}} - \text{O}(\text{CH}_2)_4\text{O} - \left[\text{H} \right]_n$
名称	有机玻璃/聚甲基丙烯酸甲酯	聚己二酸乙二酯	聚对苯二甲酸丁二酯
结构	$\text{HO} - \overset{\text{O}}{\parallel}{\text{C}} - \underset{\text{CH}_3}{\text{CH}} - \text{O} - \left[\text{H} \right]_n$	$\text{HO} - \overset{\text{O}}{\parallel}{\text{C}} - (\text{CH}_2)_5 - \text{O} - \left[\text{H} \right]_n$	$\text{HO} - \overset{\text{O}}{\parallel}{\text{C}} - \underset{\text{C}_2\text{H}_5}{\text{CH}} - \text{O} - \left[\text{H} \right]_n$
名称	聚乳酸	聚-6-羟基己酸酯	聚-2-羟基丁酸酯
结构	$\text{HO} - \overset{\text{O}}{\parallel}{\text{C}} - \text{C}_6\text{H}_4 - \overset{\text{O}}{\parallel}{\text{C}} - \text{OCH}_2\text{CH}_2\text{O} - \left[\text{H} \right]_n$	$\text{H} - \text{NH} - \overset{\text{O}}{\parallel}{\text{C}} - \text{NH} - \text{CH}_2 - \left[\text{H} \right]_n \text{OH}$	$\text{H} - \text{C}_6\text{H}_3(\text{OH}) - \text{CH}_2 - \left[\text{H} \right]_n \text{OH}$
名称	涤纶/聚对苯二甲酸乙二酯	脲醛树脂	酚醛树脂