## 第四章 炔烃和二烯烃

1.

- (1) 4,5-二甲基-1-己炔
- (2) 2,2,7,7-四甲基-3,5-辛二炔
- (3) (2E,4Z)-3,4,5-三甲基-2,4-辛二烯 (4) 3,5-二甲基-1-乙基-1,3-环戊二烯
- (5) (E)-3,6-二甲基-5-异丙基-4-庚烯-1- (6) 7-甲基-10-乙基-4-正丙基-4-十二碳烯 炔
  - -8-炔
- (7) (Z)-4-乙基-3-正丙基-1,3 己二烯-5- (8) 1-乙基-2-丙炔基环己烯 炔

2.略

3.

$$(1) \qquad \qquad (2) \qquad H \qquad CH_3 \qquad (3) \qquad Br \qquad \\ CH_3 \qquad (3) \qquad (3) \qquad (3) \qquad (3) \qquad (4) \qquad (4) \qquad (4) \qquad (5) \qquad (5) \qquad (5) \qquad (5) \qquad (6) \qquad ($$

- 4. (1) HC≡CNa + CH<sub>3</sub>OH → HC≡CH + CH<sub>3</sub>ONa
  - (2) HC≡CH + NaH → HC≡CNa + H<sub>2</sub>
  - (3) 不能
  - (4) HC≡CNa + CH<sub>3</sub>COOH → HC≡CH + CH<sub>3</sub>COONa
- 5. (5)>(4)>(3)>(2)>(1)
- 6.(3)>(2)>(1)>(4)
- 7. (1)

(2)

2 CH
$$\equiv$$
CH  $\xrightarrow{\text{Cu}_2\text{Cl}_2}$  H<sub>2</sub>C=C=C=CH  $\xrightarrow{\text{H}_2\text{O}}$  TM.

(3)