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|  | **Reactant 1** | **Precursor 2** | **Comment Reactant 1** | **Comment Precursor 2** | **Product** |
| (**1**) | C2H2 | 1-Bromotriphenylene | Gas  75 Torr | T(oven) = 423 K  T(SiC) = 1300 K | Benzo[*e*]pyrene |
| (**2**) | C4H4  5 % in He | 4-Bromopyrene | Gas  75 Torr | T(oven) = 403 K  T(SiC) = 1400 K |
| (**3**) | C6H5NO  1 % in He | Phenanthrene | T(Bub) = 293 K  90 Torr | T(oven) = 358 K  T(SiC) = 1300 K |
| (**4**) | C2H2 | Benzo[*e*]pyrene | Gas  75 Torr | T(oven) = 423 K  T(SiC) = 1300 K | Benzo[*ghi*]perylene |
| (**5**) | C2H2 | 1-Bromobenzo[*ghi*]perylene | Gas  165 Torr | T(oven) = 358 K  T(SiC) = 1500 K | Coronene |