Chain initiation

Chain propagation

$$A^* + G \longrightarrow G^* + A$$
 $G^* + (n-2)G \longrightarrow G_{n-1}^*$
 $A^* + G \longrightarrow A-G^*$
 $A-G^* + G \longrightarrow A-G_2^*$
 $A^* + G \longrightarrow A-G_1^*$
 $A^* + G \longrightarrow A-G_1^*$

Chain termination

$$A-G_n^* + G \longrightarrow A-G_{n+1}$$
 $G_n^* + G \longrightarrow G_{n+1}$
 $A-G_n^* + A-G_m^* \longrightarrow A-G_n-G_m-A$

A: Aramide fibers A*: free radicals of Aramide fibers G: monomer of GMA G*: free radicals of GMA

Scheme 1S The synthesis mechanism of PGMA on the surface of KF fibers