8. The process of any one of claims 1 to 4, wherein said alkylation conditions include a temperature from ~~about~~ 20°C to ~~about~~ 500°C, a pressure from ~~about~~ 20.3 to 4800 kPa-a, a WHSV from ~~about~~ 0.1 to ~~about~~ 50 h^{-1} based on the weight of said alkylating agent, and a molar ratio of said alkylatable compound over said alkylating agent from ~~about~~ 0.1:1 to 50:1.

9. The process of any one of claims 1 to 4, wherein said product comprises polyalkylated aromatic compound(s), further comprising steps of:

(c) separating said polyalkylated aromatic compound(s) from said product to form a

transalkylation feed stream; and

(d) contacting at least a portion of said transalkylation feed stream with a feedstock

comprising an alkylatable aromatic compound in the presence of a transalkylation catalyst to produce a transalkylation effluent in a transalkylation reaction zone maintained under transalkylation conditions, said transalkylation effluent which comprises said monoalkylated aromatic compound.

10. The process of claim 9, wherein said transalkylation catalyst comprises a molecular sieve selected from the group consisting of MCM-22, MCM-36, MCM-49 and MCM-56, beta zeolite, faujasite, mordenite, TEA-mordenite, PSH-3, SSZ-25, ERB-1, ITQ-1, ITQ-2, zeolite Y, Ultrastable Y (USY), Dealuminized Y, rare earth exchanged Y (REY), ZSM-3, ZSM-4, ZSM-18, ZSM-20, or any combination thereof.

12. The process of any one of claims 1 to 4, wherein said transalkylation conditions include a temperature of 100 to 300°C and a pressure of 696 to 4137 kPa-a, a WHSV based on the weight of said polyalkylated aromatic compound(s) of ~~about~~ 0.5 to 200 h^{-1}, a molar ratio of said alkylatable aromatic compound to said polyalkylated aromatic compound(s) of 0.5:1 to 10:1.