Electronic Supplementary Information (ESI)

Design of AB Divinyl "Template Monomers" toward Alternating Sequence Control in Metal-Catalyzed Living Radical Polymerization

Yusuke Hibi, Shinsuke Tokuoka, Takaya Terashima, Makoto Ouchi*, and Mitsuo Sawamoto*

Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University, Katsura, Nishikyo-ku, Kyoto 615-8510, Japan.
Tel: +81-75-383-2601; Fax: +81-75-383-2601
E-mail: ouchi@living.polym.kyoto-u.ac.jp (M.O.), sawamoto@star.polym.kyoto-u.ac.jp (M.S.)

Figure ESI-1. Tacticity analyses by $^1$H NMR spectra (CDCl$_3$, r.t.) with $\alpha$-methyl proton of PMMA at 0.8–1.2 ppm. (A) PMMA via hydrolysis/methylation of poly(BzMA): polymerization of BzMA; [BzMA]$_0$/[H–(MMA)$_2$–Cl]$_0$/[Cp*RuCl(PPh$_3$)$_2$]$_0$/$n$-Bu$_2$NH = 2000/100/2.0/40 mM in DCE at 80°C [poly(BzMA): $M_n$ = 3400; $M_w/M_n$ = 1.36]. (B) PMMA via hydrolysis/methylation of poly(Naph-MM): polymerization of Naph-MM; [Naph-MM]$_0$/[H–(MMA)$_2$–Cl]$_0$/[Cp*RuCl(PPh$_3$)$_2$]$_0$/$n$-Bu$_2$NH = 100/4/0.4/16 mM in DCE at 60°C [poly(Naph-MM): $M_n$ = 5900; $M_w/M_n$ = 1.19]. See the main text for the condition of hydrolysis/methylation.