Supporting Information

On the Structure of Trimethyltin Fluoride

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Fig. S1 (a) $^1$H{$^{19}$F} MAS NMR spectrum of non-recrystallized (CH$_3$)$_3$SnF at a spinning rate of 24 kHz; and (b) $^1$H{$^{19}$F} ($^{19}$F to $^1$H CP) MAS NMR spectrum of (CH$_3$)$_3$SnF. The signal marked by an asterisk (*) arises from the Vespel$^\text{TM}$ material of the end cap and drive tip. Daggers (†) denote spinning sidebands.
Fig. S2 $^1$H/$^{19}$F MAS NMR spectrum of recrystallized $(\text{CH}_3)_3\text{SnF}$ at a spinning rate of 24 kHz. The resonance marked by an asterisk (*) arises from the Torlon™ material of the end cap and drive tip. Daggers (†) denote spinning sidebands.
Fig. S3 (a) $^{13}$C{$^{1}$H, $^{19}$F} MAS NMR spectrum of recrystallized (CH$_3$)$_3$SnF at a spinning rate of 24 kHz. (b) Deconvolution of the isotropic band in the $^{13}$C{$^{1}$H, $^{19}$F} MAS NMR spectrum of recrystallized (CH$_3$)$_3$SnF.
Fig. S4 $^{19}$F-$^1$H MAS NMR spectrum of non-recrystallized (CH$_3$)$_3$SnF at a spinning rate of 24 kHz. Insert shows the doublet and triplet $^{117,119}$Sn satellites arising from the symmetric linear Sn–F–Sn moiety.
Fig. S5 (a) Simulated and (b) experimental $^{19}$F-$^1$H MAS NMR spectrum of non-recrystallized $(\text{CH}_3)_3\text{SnF}$ at a spinning rate of 15.5 kHz at 20 °C.
Fig. S6 (a) Simulated and (b) experimental \(^{19}\text{F}\{^{1}\text{H}\}\) MAS NMR spectrum of recrystallized \((\text{CH}_3)_2\text{SnF}\) at a spinning rate of 15.5 kHz at 20 °C.
Fig. S7 (a) Simulated and (b) experimental $^{119}$Sn-$^{19}$F,$^1$H MAS NMR spectrum of recrystallized $(\text{CH}_3)_3\text{SnF}$ at a spinning rate of 15.5 kHz at 20 °C.
Fig. S8 (a) Simulated and (b) experimental $^{119}$Sn$^1$H\textsuperscript{1} MAS NMR spectrum of recrystallized $(\text{CH}_3)_3\text{SnF}$ at a spinning rate of 15.5 kHz at 20 °C.