## Supplementary Information for

# The $\mathrm{Pd}(\mathrm{AcO})_{2} / t-\mathrm{Bu}_{3} \mathrm{P} / \mathrm{K}_{3} \mathrm{PO}_{4}$ catalytic system for the control of the Suzuki cross-coupling polymerisation 

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Figure S1. ${ }^{1} \mathrm{H}-\mathrm{NMR}$ spectrum of 2,7-diphenyl-9,9-di-n-octylfluorene.


Figure S2. ${ }^{13} \mathrm{C}\left\{{ }^{1} \mathrm{H}\right\}$-NMR spectrum of 2,7-diphenyl-9,9-di-n-octylfluorene.


Figure S3. HRMS( + ) spectrogram of the reaction mixture obtained according to Method A (1 equiv $t$ - $\mathrm{Bu}_{3} \mathrm{P}$ ) showing complex $\beta$ as Na -adduct.


Figure S4. HRMS(+) spectrogram of the reaction mixture obtained according to Method A (2 equiv $t$ - $\mathrm{Bu}_{3} \mathrm{P}$ ) showing complex $\delta$ as $[\mathrm{M}-\mathrm{AcO}]^{+}$.


Figure S5. Typical ${ }^{1} \mathrm{H}$-NMR spectrum of the poly( 9,9 -di- $n$-octylfluorene)s obtained by method B.


Figure S6. HRMS(+) spectrogram of the products obtained according to Method B with a $\mathbf{F L} / \mathrm{Pd}(\mathrm{AcO})_{2}$ molar ratio of $2 / 1$.


Figure S7. ${ }^{1} \mathrm{H}-\mathrm{NMR}$ spectrum (aromatic region) of the polymer isolated from entry 12.


Figure S8. ${ }^{1} \mathrm{H}-\mathrm{NMR}$ spectrum (aromatic region) of the polymer isolated from entry 13.


Figure S9. ${ }^{1} \mathrm{H}-\mathrm{NMR}$ spectrum (aromatic region) of the polymer isolated from entry 14.


Figure S10. GPC traces of the isolated polymers (Table 1 of the manuscript, entries 12-14).


Figure Sni. Number-average molecular weights $\left(\mathrm{M}_{\mathrm{n}}\right)$ vs monomer $/ \mathrm{Pd}(\mathrm{AcO})_{2}$ feed ratio of the isolated polymers (Table 1 of the manuscript, entries 12-14).

