Supplementary Information

Figure S1. $^1$H-NMR of compound 3a.

Figure S2. $^{13}$C-NMR of compound 3a.
Figure S3. $^1$H-NMR of compound 4b.

![$^1$H-NMR of compound 4b](image)

Figure S4. $^{13}$C-NMR of compound 4b.

![$^{13}$C-NMR of compound 4b](image)
Figure S5. $^1$H-NMR of compound 5b.

Figure S6. $^{13}$C-NMR of compound 5b.
Figure S7. $^1$H-NMR of compound 4c.

Figure S8. $^{13}$C-NMR of compound 4c.
Figure S9. $^1$H-NMR of compound 4d.

Figure S10. $^{13}$C-NMR of compound 4d.
Figure S11. $^1$H-NMR of compound 4e.

Figure S12. $^{13}$C-NMR of compound 4e.