Cascade Synthesis of Thieno[2,3-b]pyridines by Using Intramolecular Cyclization Reactions of 3-Cyano-2-(organylmethylthio)pyridines

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**Figure S1.** FTIR (KBr) spectrum of compound 6a.

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Figure S2. $^1$H NMR spectrum (400 MHz, DMSO-$d_6$) of compound 6a.

Figure S3. $^{13}$C NMR spectrum (100 MHz, DMSO-$d_6$) of compound 6a.
Figure S4. Mass spectrum of compound 6a.

Figure S5. FTIR (KBr) spectrum of compound 6b.
Figure S6. $^1$H NMR spectrum (400 MHz, DMSO-$d_6$) of compound 6b.

Figure S7. $^{13}$C NMR spectrum (100 MHz, DMSO-$d_6$) of compound 6b.
Figure S8. Mass spectrum of compound 6b.

Figure S9. FTIR (KBr) spectrum of compound 6c.
Figure S10. $^1$H NMR spectrum (400 MHz, DMSO-$d_6$) of compound 6c.

Figure S11. $^{13}$C NMR spectrum (100 MHz, DMSO-$d_6$) of compound 6c.
Figure S12. Mass spectrum of compound 6c.

Figure S13. FTIR (KBr) spectrum of compound 6d.
Figure S14. $^1$H NMR spectrum (400 MHz, DMSO-$d_6$) of compound 6d.

Figure S15. $^{13}$C NMR spectrum (100 MHz, DMSO-$d_6$) of compound 6d.
Figure S16. Mass spectrum of compound 6d.

Figure S17. FTIR (KBr) spectrum of compound 6e.
Figure S18. $^1$H NMR spectrum (400 MHz, DMSO-$d_6$) of compound 6e.

Figure S19. Mass spectrum of compound 6e.
Figure S20. FTIR (KBr) spectrum of compound 6f.

Figure S21. 1H NMR spectrum (400 MHz, DMSO-d$_6$) of compound 6f.
Figure S22. Mass spectrum of compound 6f.