

Supporting Information

Absolute Asymmetric Photocyclization of Triisopropylbenzophenone Derivatives in Crystals and their Morphological Changes

Hideko Koshima,^{*,†} Michitaro Fukano,[†] Naoko Ojima,[†] Kohei Johmoto,[‡] Hidehiro Uekusa,[‡]
and Motoo Shiro[§]

[†] Department of Materials Science and Biotechnology, Graduate School of Science and Engineering, Ehime University, Matsuyama, Ehime 790-8577, Japan

[‡] Department of Chemistry and Materials Science, Tokyo Institute of Technology, 2, Ookayama, Meguro-ku, Tokyo 152-8551, Japan

[§] Rigaku Corporation, 3-9-12, Matsubara, Akishima, Tokyo 196-8666, Japan

Figure S1. ¹ H NMR of 1	.....	S2
Figure S2. ¹³ C NMR of 1	.....	S3
Figure S3. ¹ H NMR of 2	.....	S4
Figure S4. ¹³ C NMR of 2	.....	S5
Figure S5. ¹ H NMR of 3	.....	S6
Figure S6. ¹³ C NMR of 3	.....	S7
Figure S7. ¹ H NMR of (<i>R</i>)- 4 in 94% ee	.....	S8
Figure S8. ¹³ C NMR of (<i>R</i>)- 4 in 94% ee	.....	S9
Figure S9. ¹ H NMR of racemic 4	.....	S10
Figure S10. ¹³ C NMR of racemic 4	.....	S11
Figure S11. Labeled ORTEP diagram for 1	.....	S12
Figure S12. Labeled ORTEP diagram for <i>M</i> - 1	.....	S13
Figure S13. Labeled ORTEP diagram for 2	.....	S14
Figure S14. Labeled ORTEP diagram for 3	.....	S15
Figure S15. Labeled ORTEP diagram for (<i>Rac</i>)- 4	.....	S16

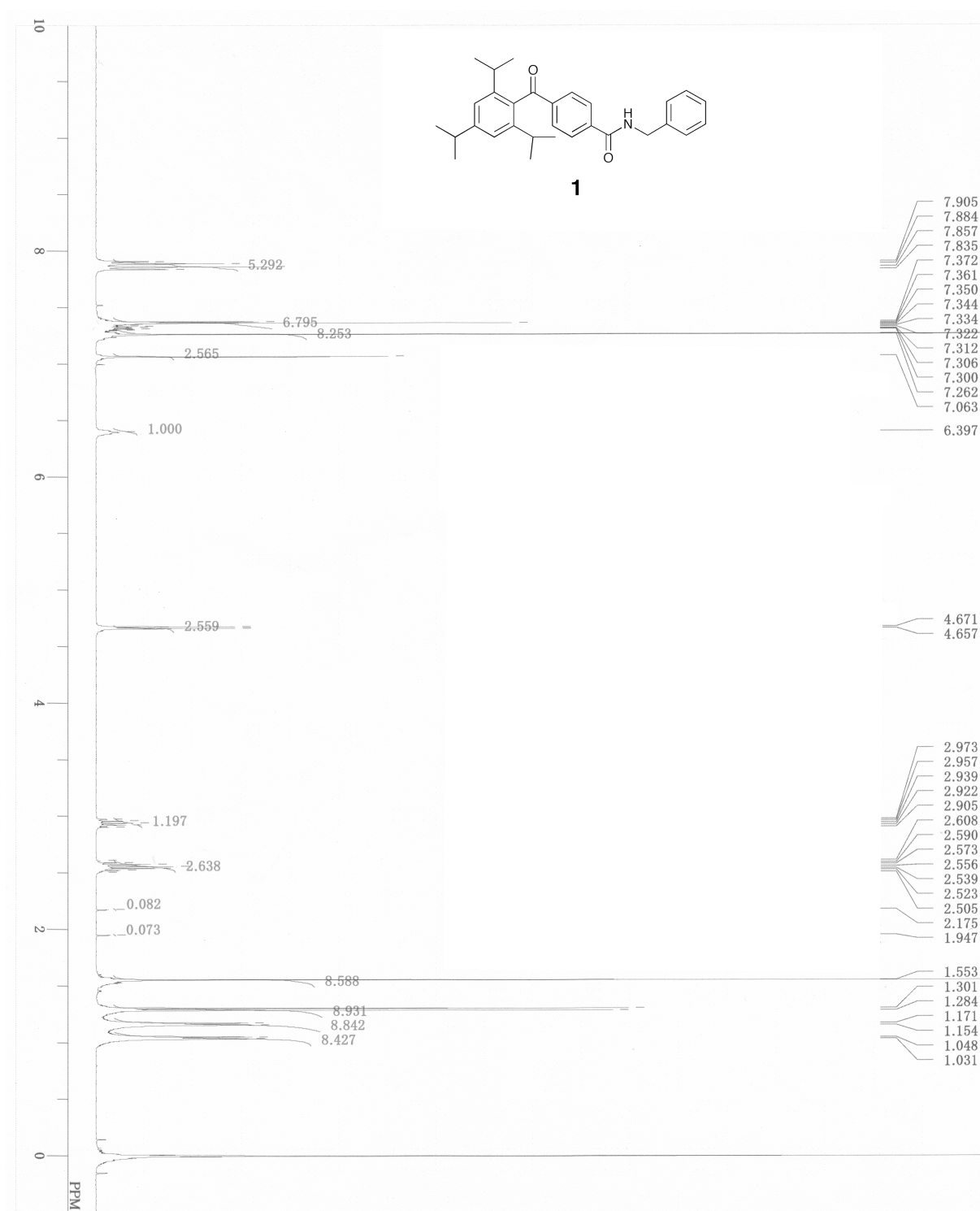


Figure S1. ¹H NMR of **1**

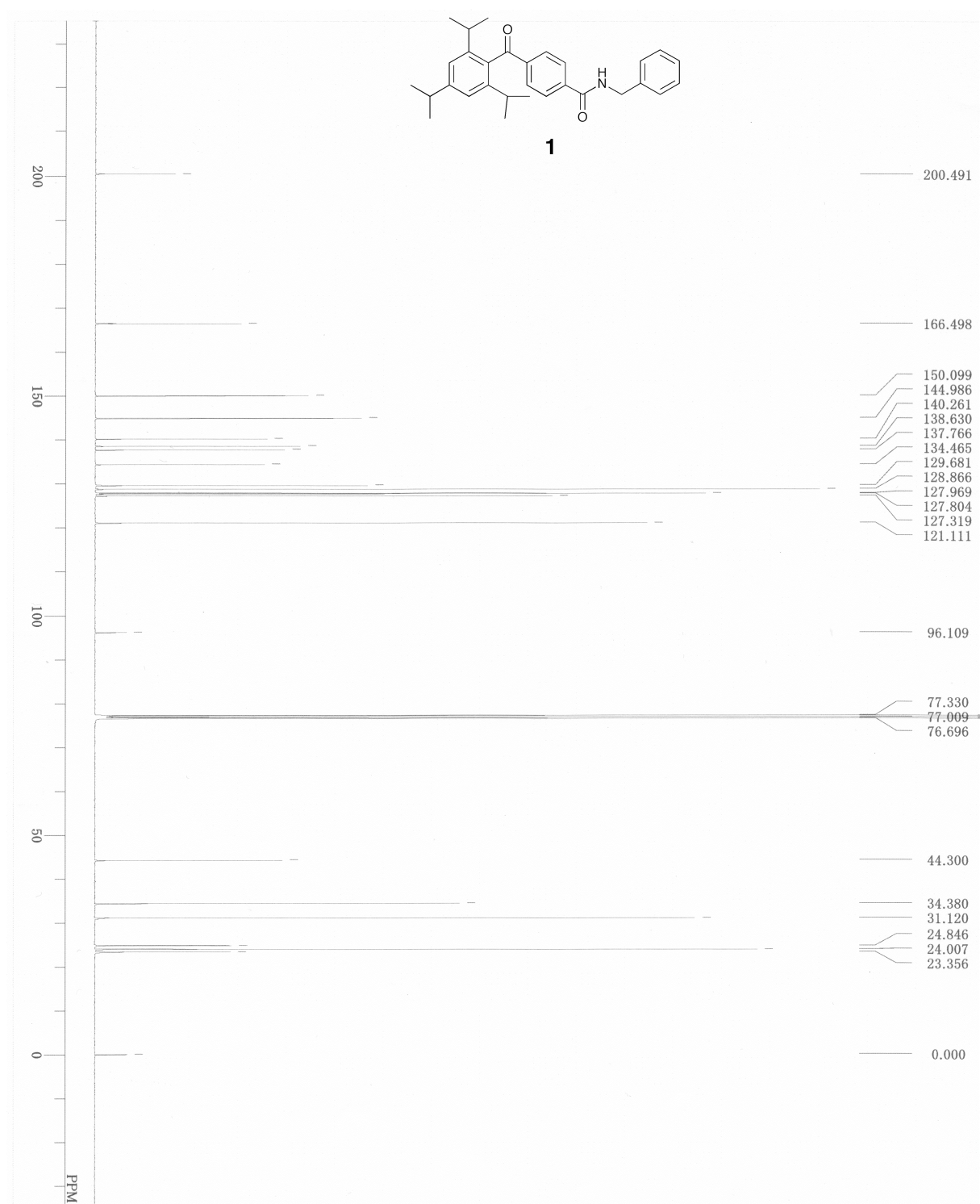


Figure S2. ¹³C NMR of **1**

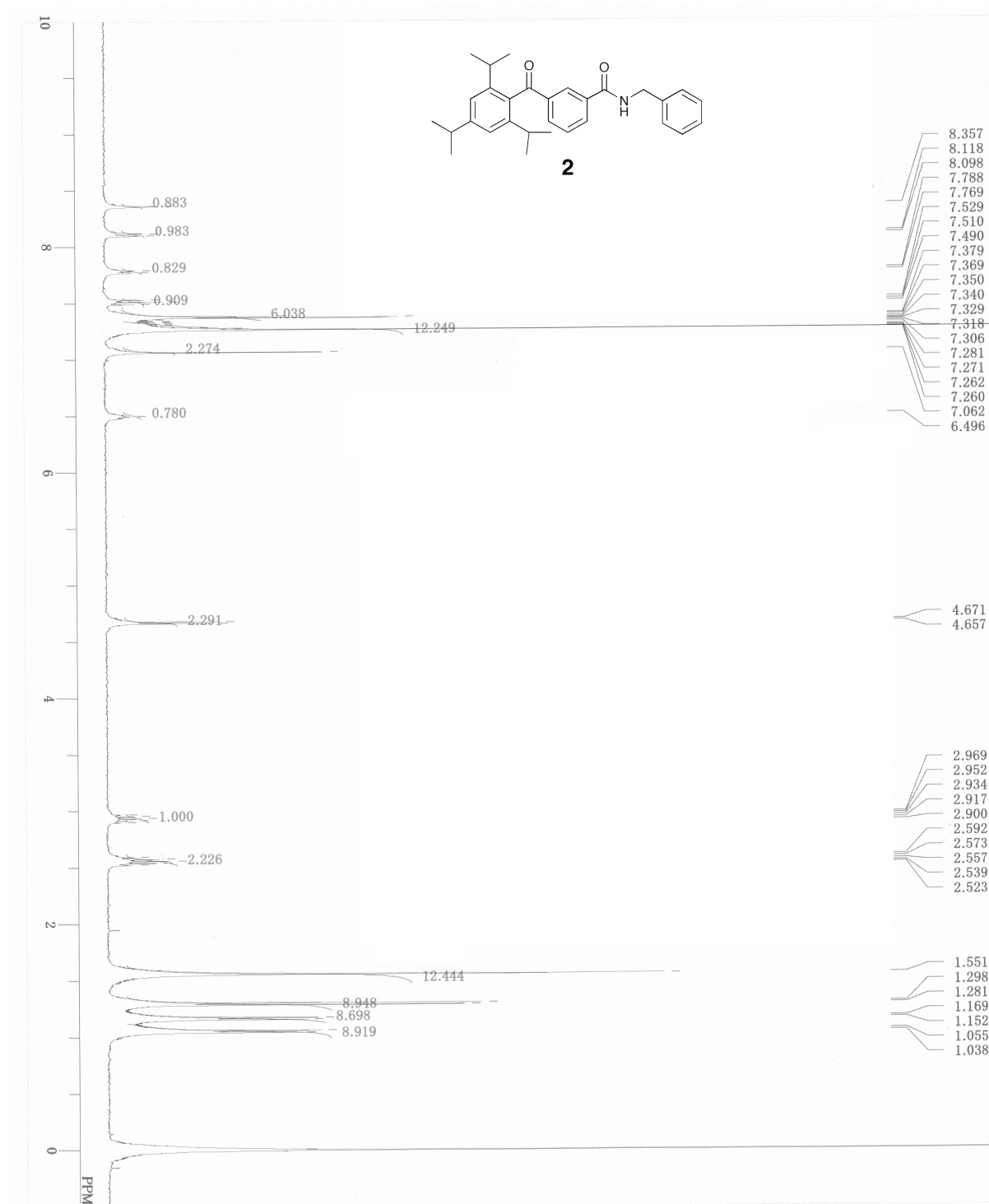


Figure S3. ¹H NMR of **2**

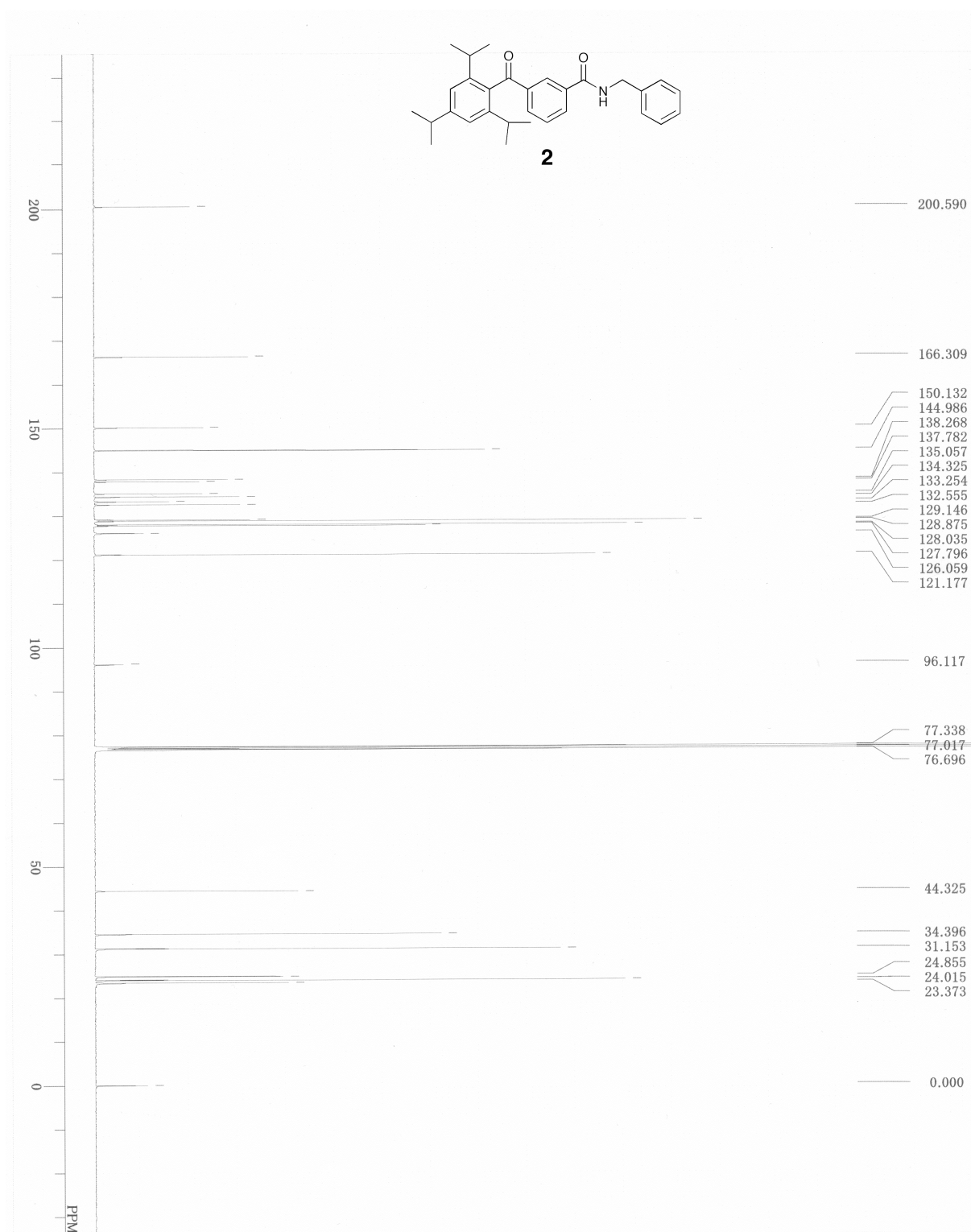


Figure S4. ¹³C NMR of **2**

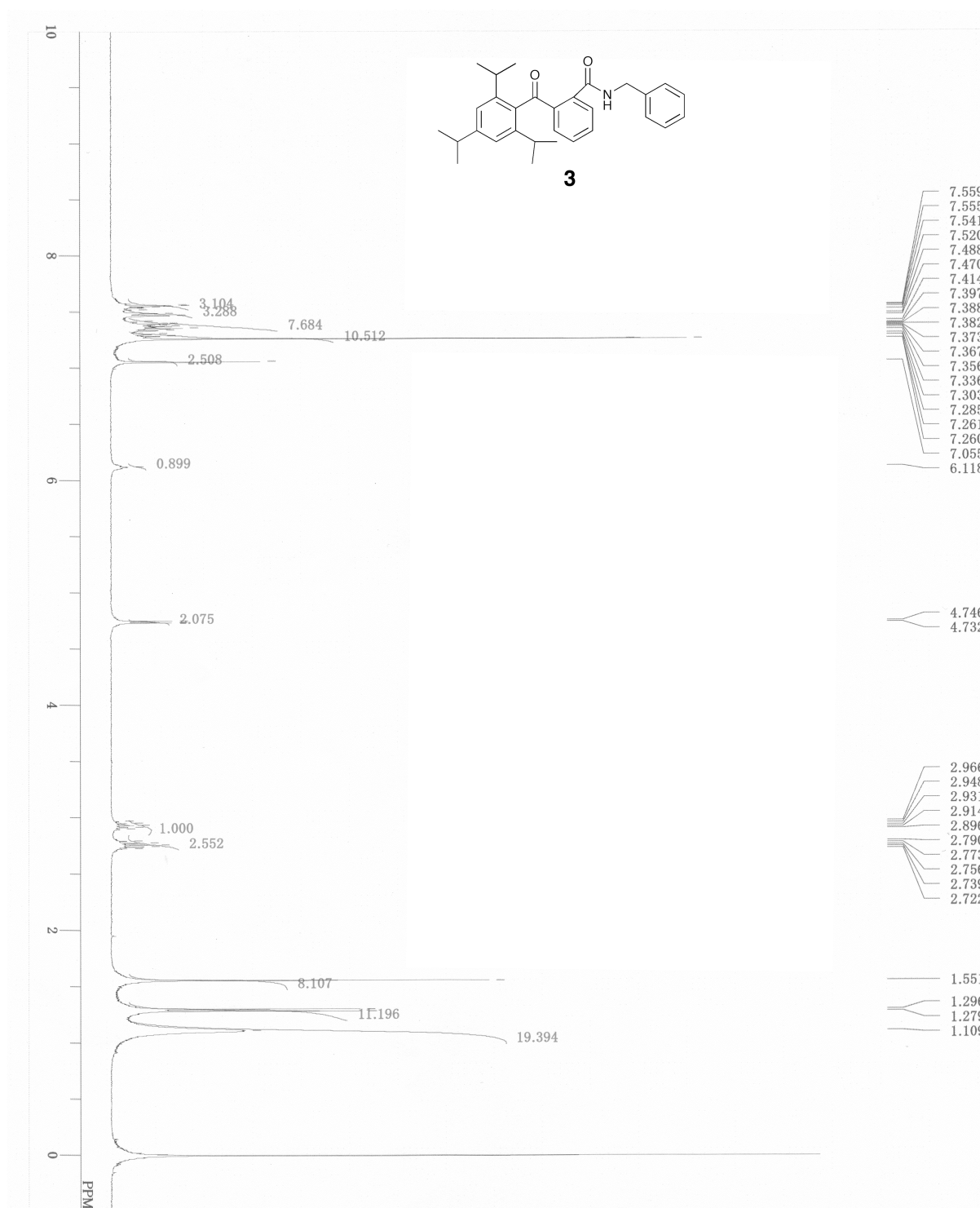


Figure S5. ^1H NMR of **3**

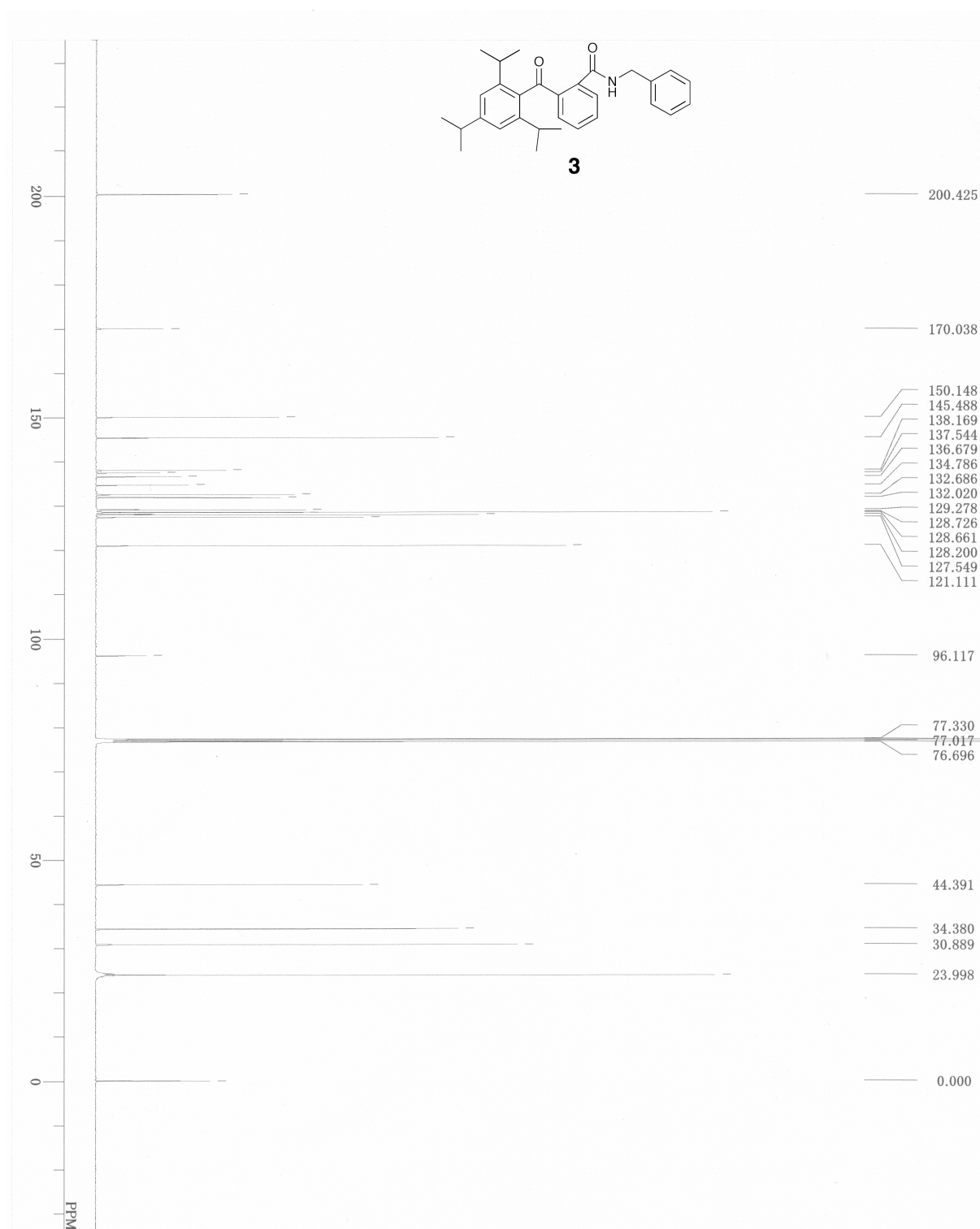


Figure S6. ¹³C NMR of **3**

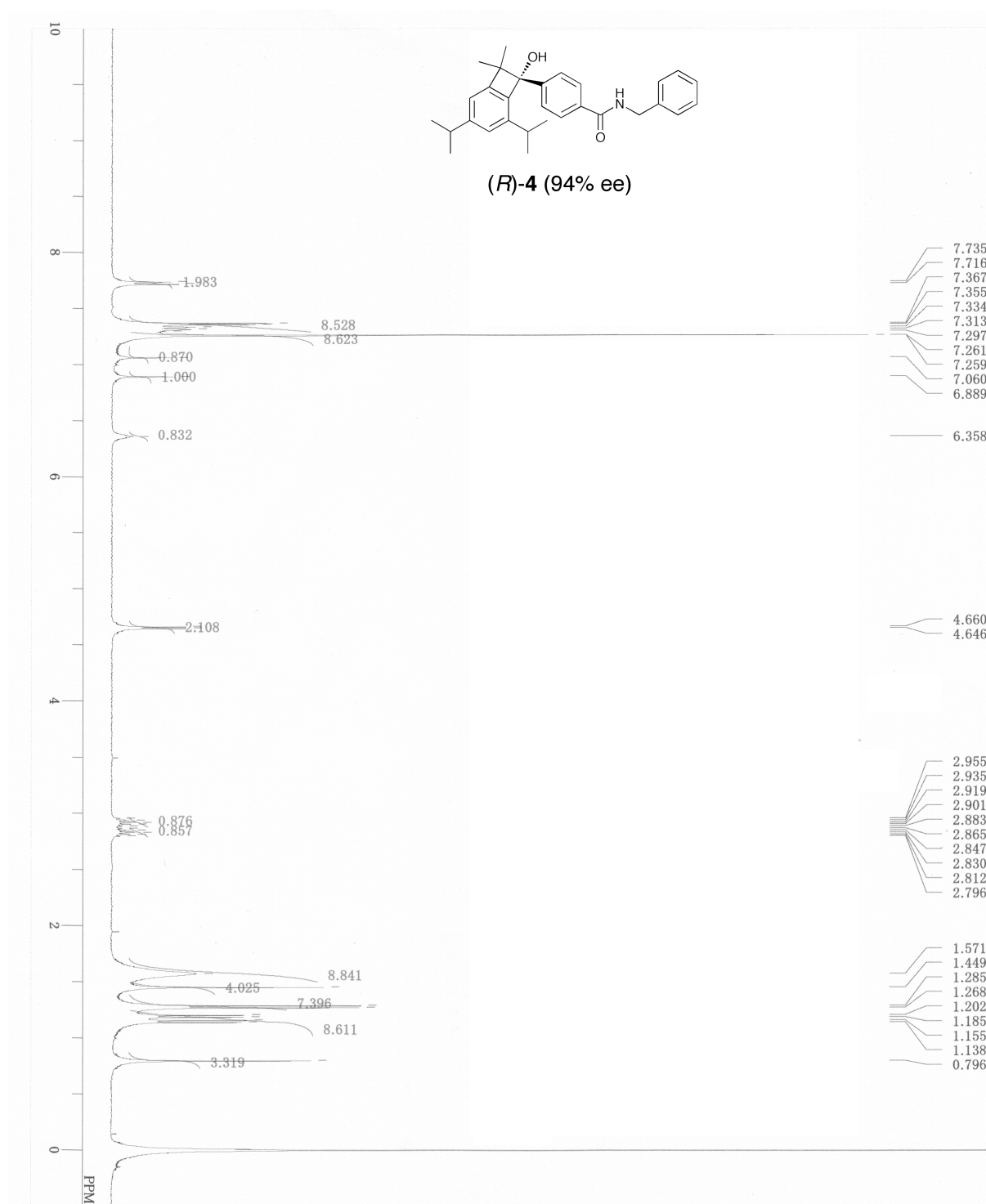


Figure S7. ¹H NMR of (R)-4 in 94% ee

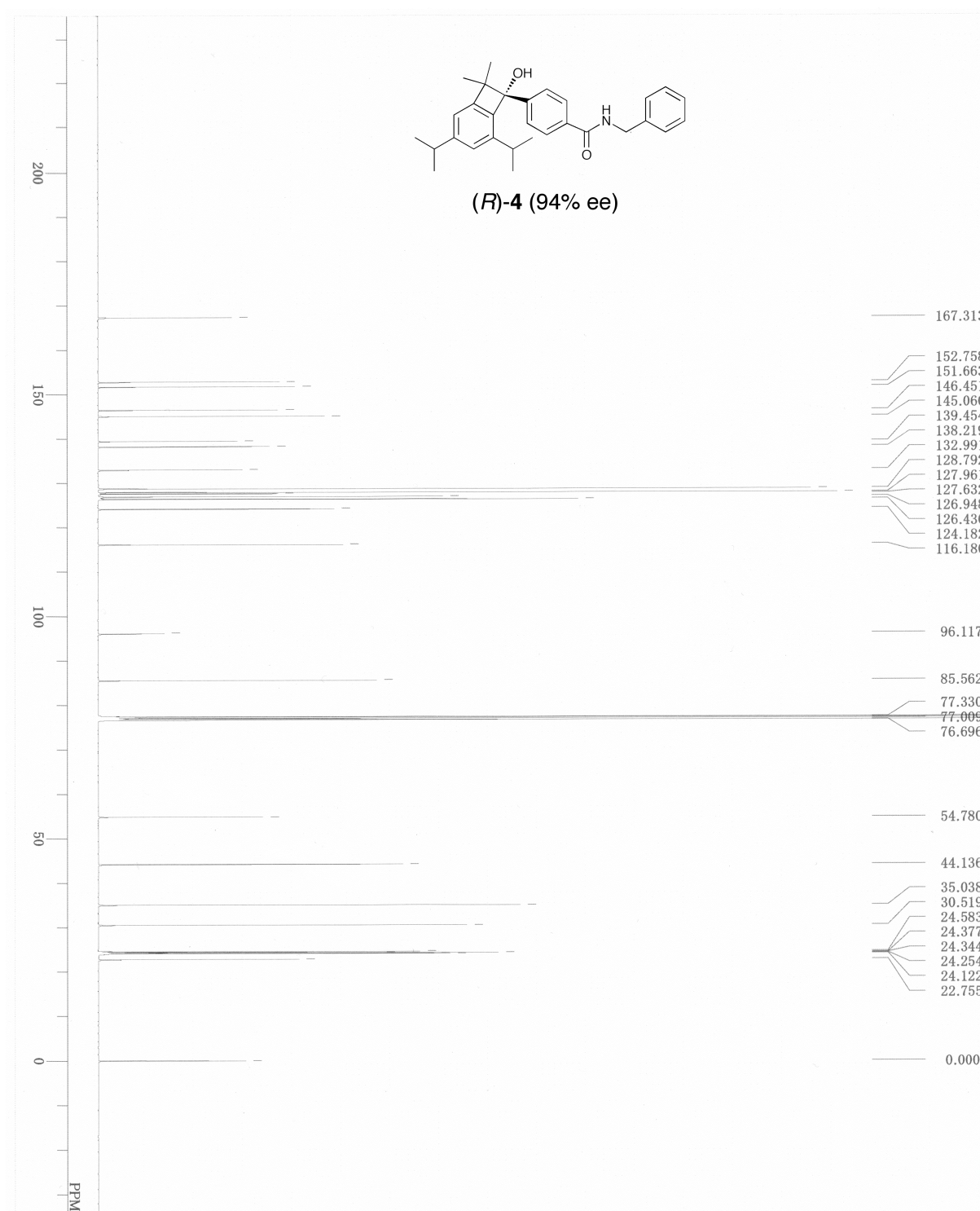


Figure S8. ¹³C NMR of (*R*)-4 in 94% ee

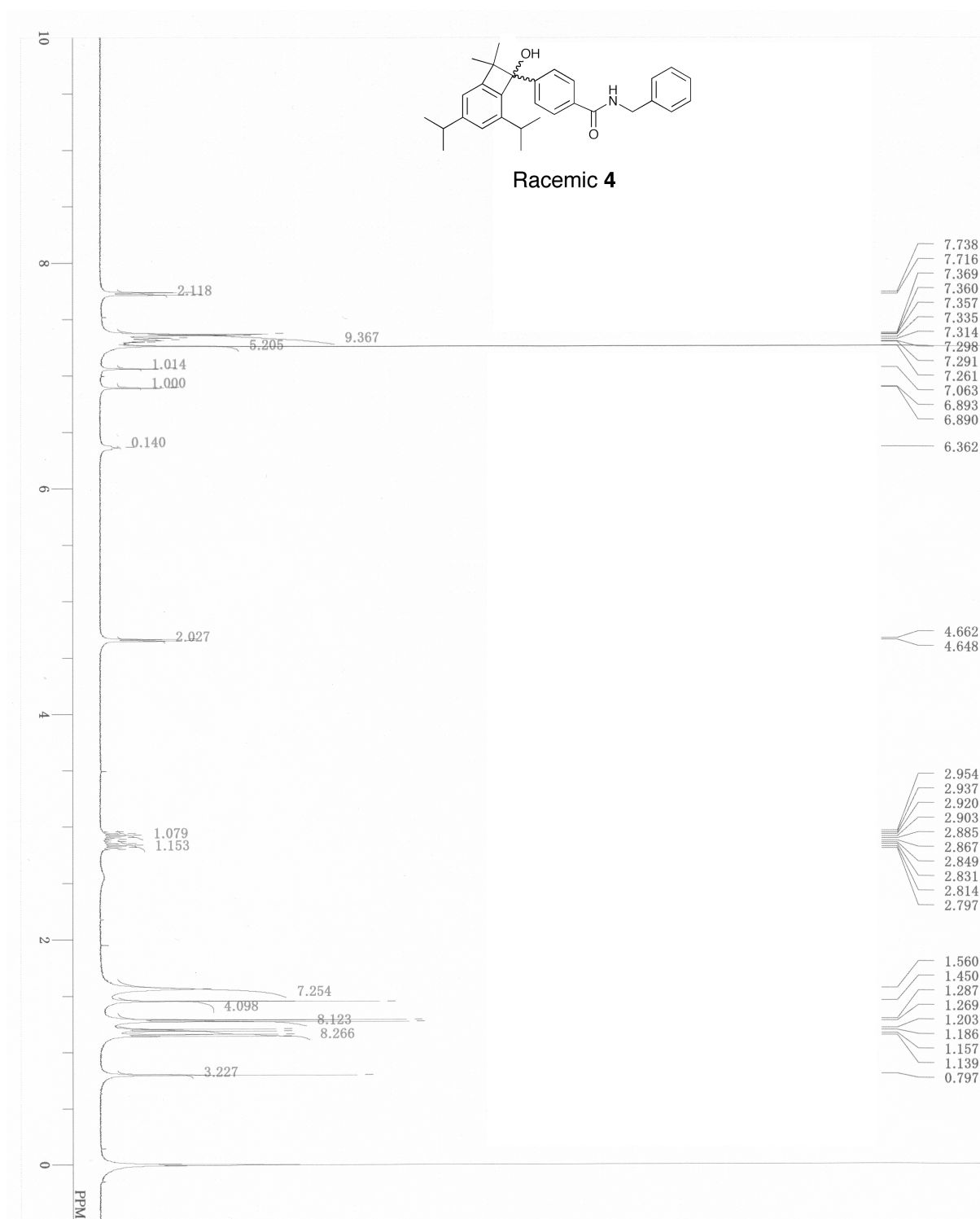


Figure S9. ^1H NMR of racemic **4**

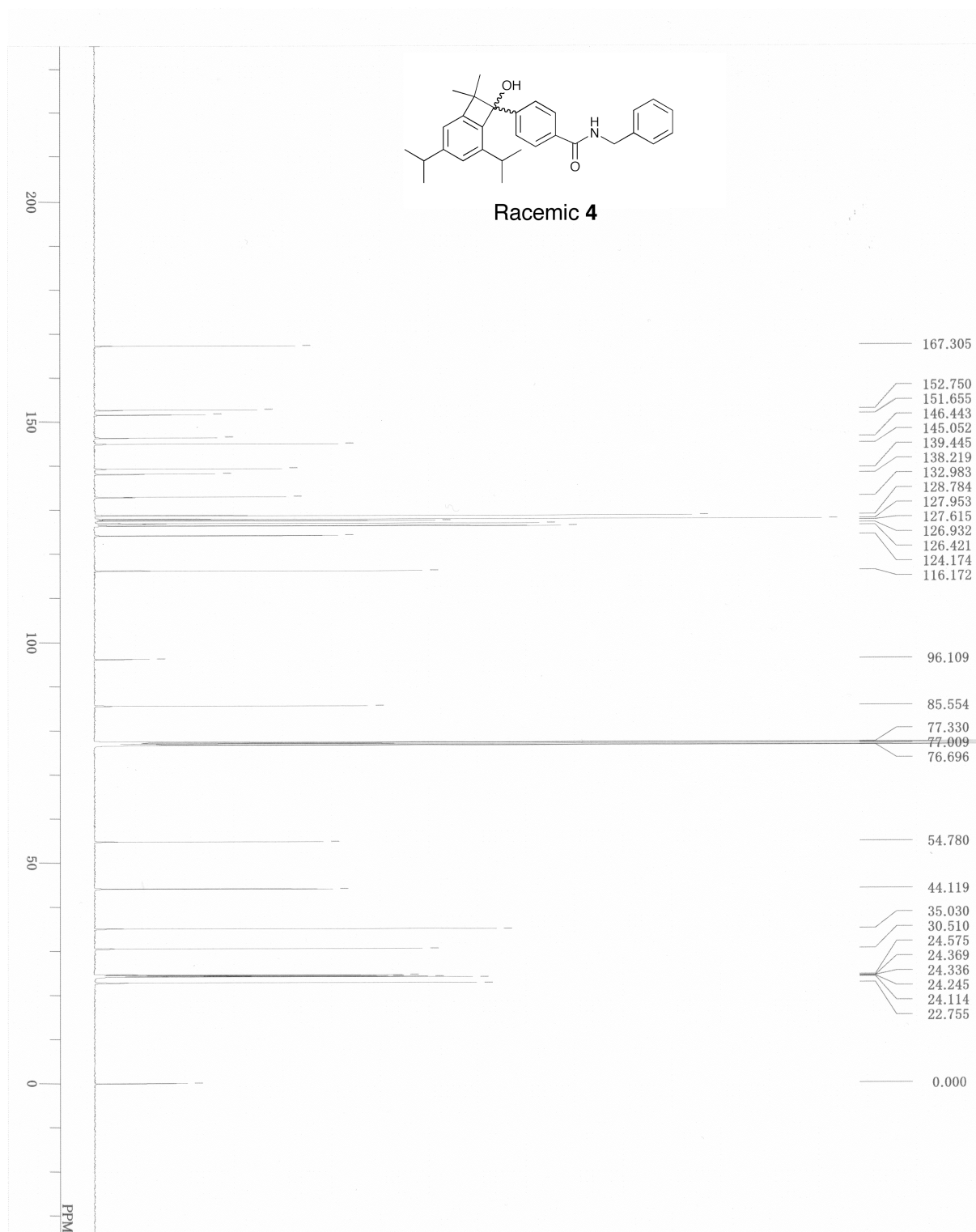


Figure S10. ¹³C NMR of racemic **4**

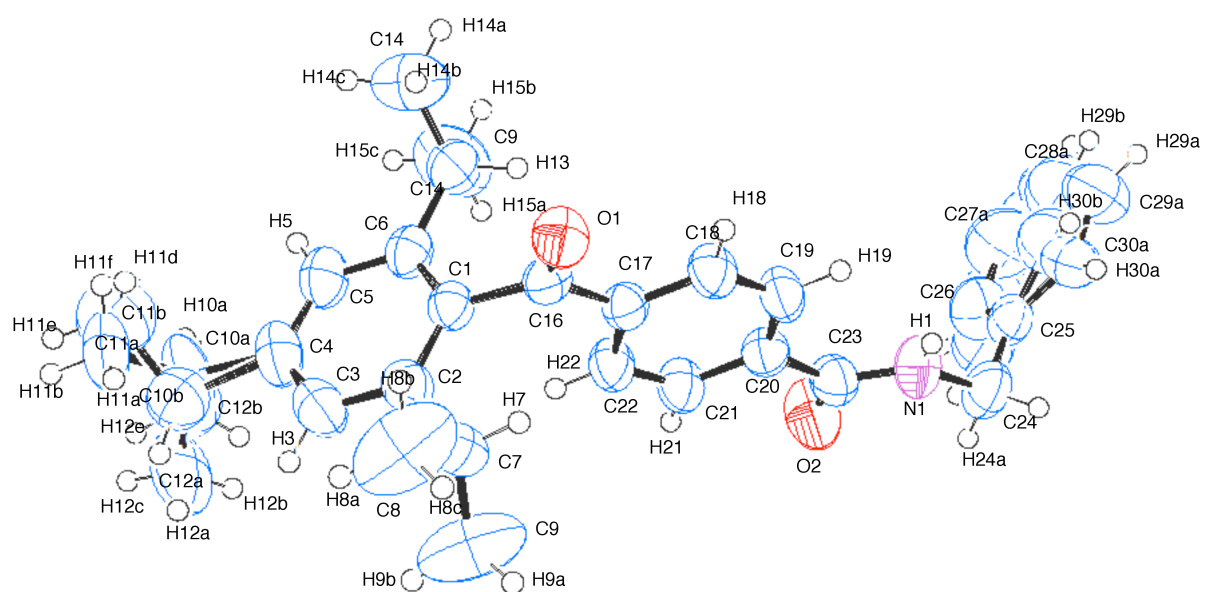


Figure S11. Labeled ORTEP diagram for **1**.

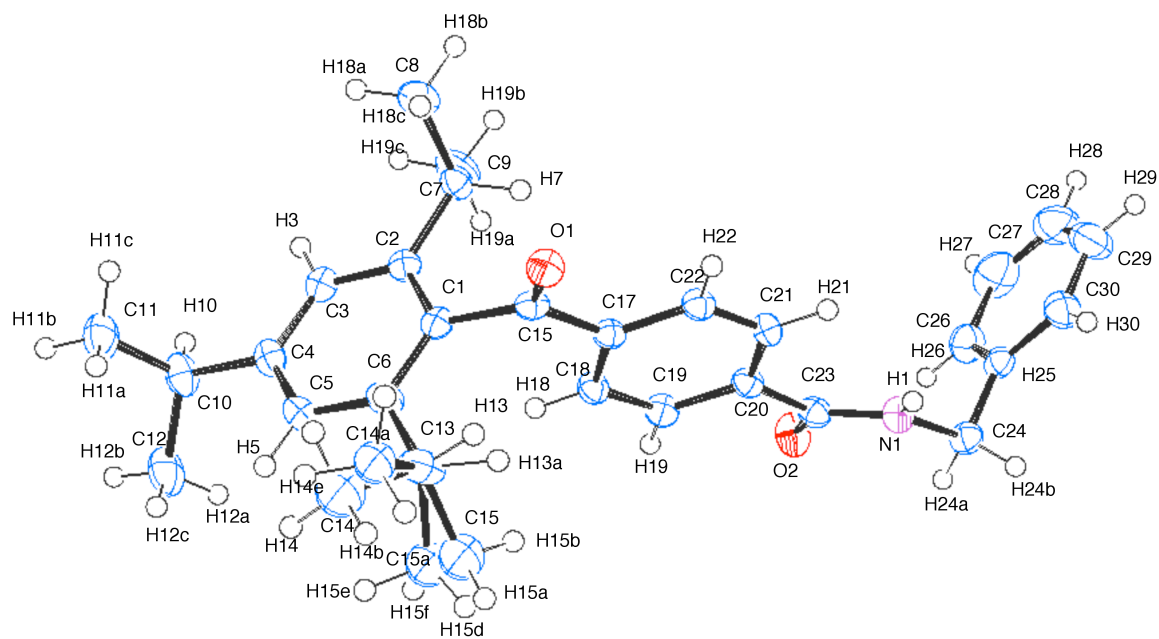


Figure S12. Labeled ORTEP diagram for *M-1*.

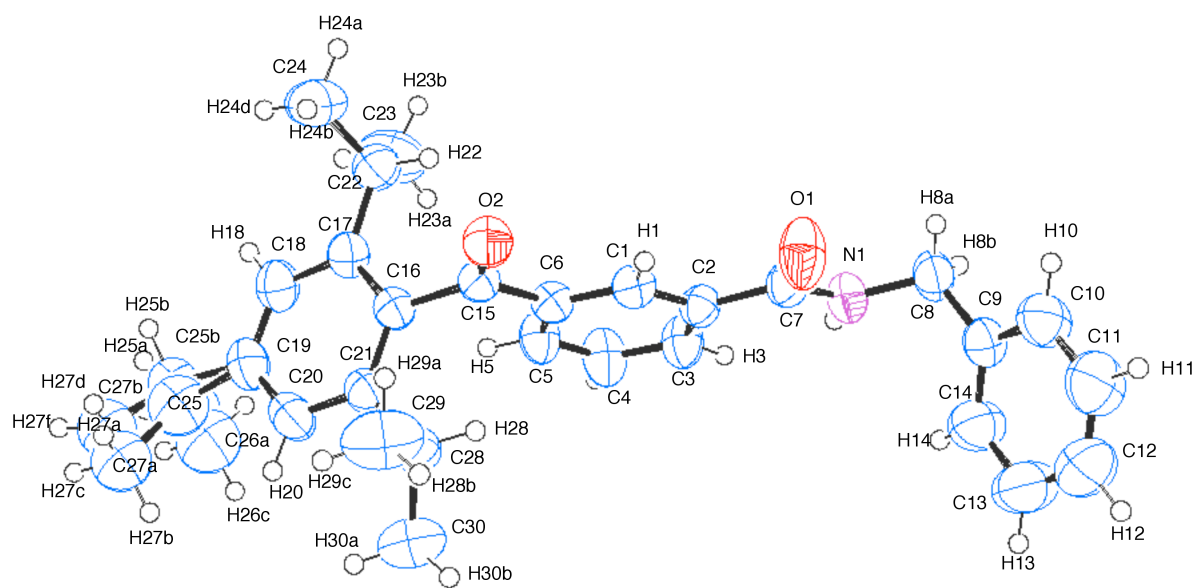


Figure S13. Labeled ORTEP diagram for **2**.

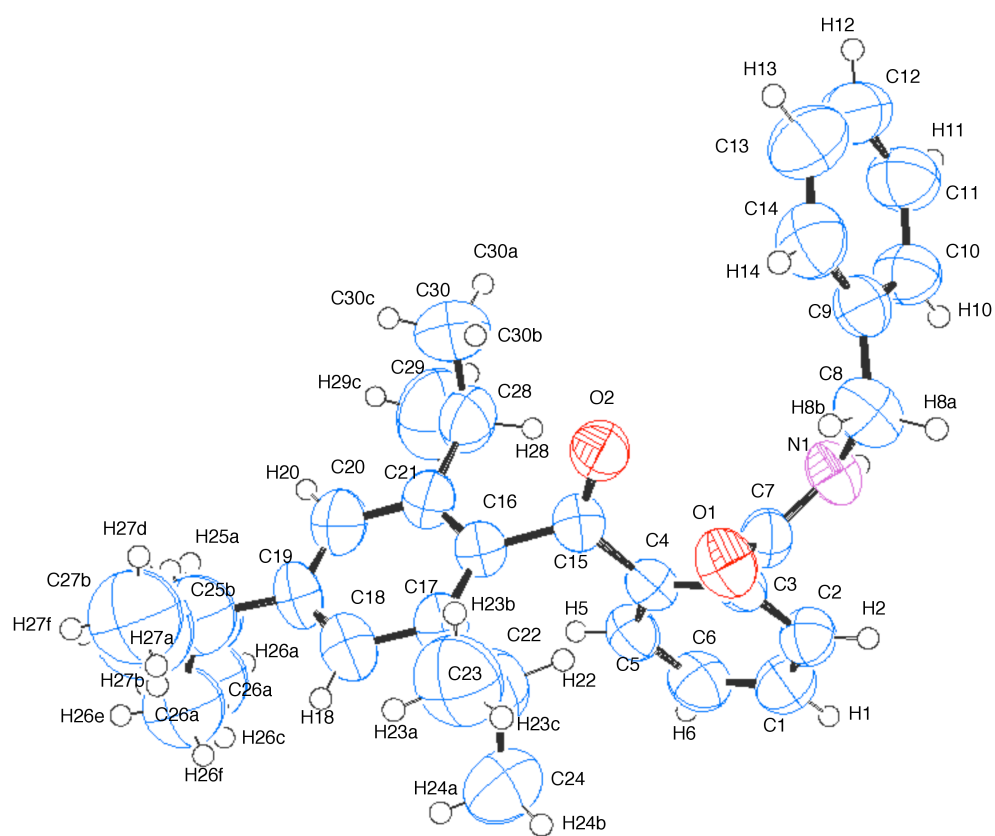


Figure S14. Labeled ORTEP diagram for **3**.

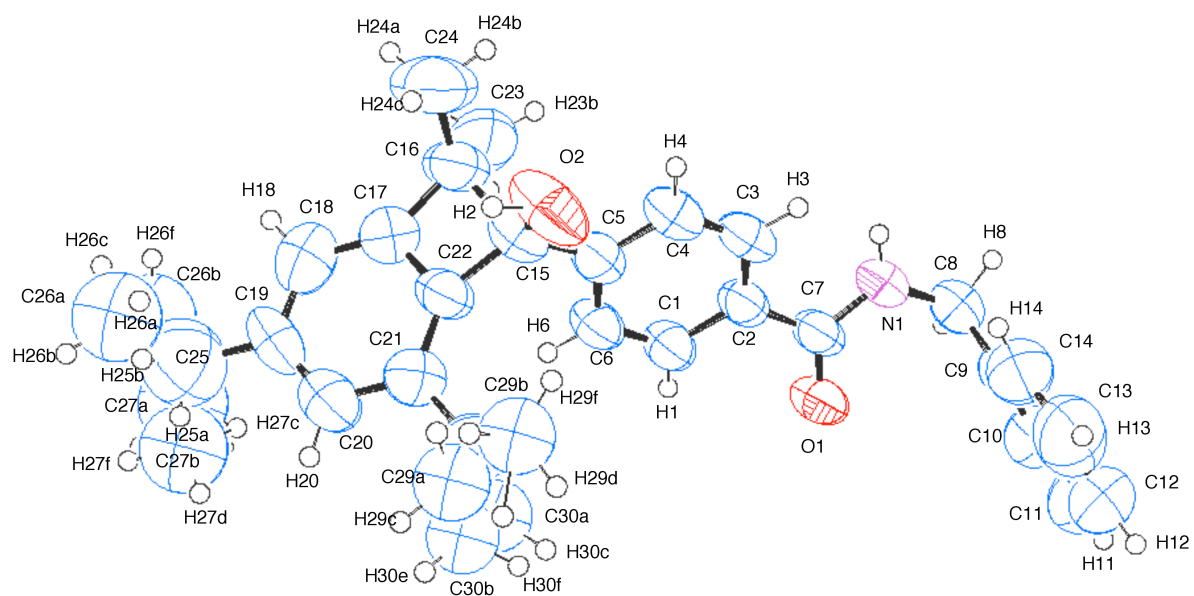


Figure S5. Labeled ORTEP diagram for (*Rac*)-**4**.