

Supporting Information

**The extent of helical induction caused by introducing  $\alpha$ -aminoisobutyric acid  
into an oligovaline sequence**

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## Supporting Information

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**Table S1.** Crystal and experimental data.

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Formula	(C <sub>62</sub> H <sub>112</sub> N <sub>12</sub> O <sub>15</sub> ), 3(CH <sub>4</sub> O)
Fw	2627.41
cell setting	triclinic, <i>P</i> 1
<i>a</i>	10.612(5) Å
<i>b</i>	17.232(8) Å
<i>c</i>	21.162(10) Å
$\alpha$	88.192(7) °
$\beta$	87.296(7) °
$\gamma$	79.182(7) °
<i>V</i>	3796(3) Å <sup>3</sup>
<i>Z</i>	1
<i>T</i>	100(2) K
Crystal description	block, 0.30×0.30×0.20 mm <sup>3</sup>
<i>D</i> <sub>x</sub>	1.149 g cm <sup>-3</sup>
<i>F</i> (000)	1430
$\mu$ (MoK $\alpha$ )	0.083 mm <sup>-1</sup>
Wavelength	0.71073 Å (MoK $\alpha$ )
$\theta_{\max}$	25.68 °
No of reflections (obs)	14000
No of reflections ( <i>I</i> >2 $\sigma$ ( <i>I</i> ))	7867
Flack x parameter	0.6(16)
No of parameters	1660
<i>R</i> 1	0.0922
<i>wR</i>	0.2264
Goodness of fit	1.007
( $\Delta/\sigma$ ) <sub>max</sub>	0.011
Fraction $\theta$ -full	0.972
$\Delta\rho_{\max}$	0.467 e Å <sup>-3</sup>
$\Delta\rho_{\min}$	-0.453 e Å <sup>-3</sup>

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**Table S2. Atomic coordinates.**

Atom	x	y	z	Ueq
<b>Molecule A</b>				
O1M	0.1551 (7)	0.1524 (4)	0.7063 (3)	0.0460 (17)
H1M	0.1836	0.1277	0.6696	0.069
C1M	0.1002 (12)	0.2353 (6)	0.6935 (5)	0.055 (3)
H1M1	0.0103	0.2463	0.7091	0.082
H1M2	0.1046	0.2462	0.6478	0.082
H1M3	0.1487	0.2690	0.7149	0.082
O2M	0.0845 (11)	0.5705 (6)	0.2015 (5)	0.107 (4)
H2M	0.1047	0.6118	0.1841	0.160
C2M	0.0942 (17)	0.4974 (7)	0.1797 (7)	0.086 (4)
H2M1	0.1595	0.4610	0.2026	0.129
H2M2	0.1188	0.4972	0.1344	0.129
H2M3	0.0112	0.4804	0.1859	0.129
O3M	0.212 (2)	0.6591 (11)	0.1386 (9)	0.177 (6)
H3M	0.1908	0.6486	0.1018	0.266
C3M	0.332 (3)	0.7043 (18)	0.1256 (14)	0.185 (12)
H3M1	0.3089	0.7583	0.1413	0.277
H3M2	0.3532	0.7061	0.0801	0.277
H3M3	0.4067	0.6759	0.1477	0.277
C1	0.2859 (8)	-0.0847 (5)	0.6730 (4)	0.031 (2)
C2	0.2401 (11)	-0.0736 (6)	0.6059 (5)	0.049 (3)
H2A	0.2031	-0.1191	0.5948	0.073
H2B	0.3128	-0.0691	0.5766	0.073
H2C	0.1747	-0.0253	0.6029	0.073
C3	0.3926 (11)	-0.1554 (6)	0.6798 (5)	0.051 (3)
H3A	0.3589	-0.2039	0.6745	0.077
H3B	0.4278	-0.1562	0.7218	0.077
H3C	0.4606	-0.1522	0.6473	0.077
C4	0.1722 (9)	-0.0886 (6)	0.7195 (5)	0.046 (2)
H4A	0.1399	-0.1374	0.7132	0.069
H4B	0.1038	-0.0429	0.7121	0.069
H4C	0.2002	-0.0881	0.7630	0.069
O1	0.3372 (6)	-0.0122 (4)	0.6810 (3)	0.0364 (14)
C5	0.3800 (9)	0.0036 (5)	0.7354 (4)	0.035 (2)
O5	0.3790 (6)	-0.0375 (3)	0.7842 (3)	0.0355 (14)
N11	0.4317 (7)	0.0703 (4)	0.7307 (3)	0.0298 (16)
H11	0.4317	0.0971	0.6946	0.036
C11	0.4872 (8)	0.0971 (5)	0.7862 (4)	0.0294 (19)
H11A	0.5596	0.0544	0.7988	0.035
C12	0.3940 (8)	0.1122 (5)	0.8424 (4)	0.0278 (19)
O12	0.4351 (5)	0.1113 (4)	0.8954 (3)	0.0333 (14)
C13	0.5439 (9)	0.1698 (6)	0.7672 (4)	0.038 (2)
H13	0.5901	0.1594	0.7252	0.045
C14	0.4410 (10)	0.2443 (5)	0.7594 (4)	0.040 (2)
H14A	0.3782	0.2344	0.7296	0.059
H14B	0.4814	0.2880	0.7432	0.059
H14C	0.3975	0.2582	0.8005	0.059
C15	0.6406 (10)	0.1847 (7)	0.8130 (5)	0.052 (3)
H15A	0.6745	0.2318	0.7991	0.079
H15B	0.7110	0.1390	0.8144	0.079
H15C	0.5991	0.1930	0.8552	0.079
N21	0.2693 (7)	0.1244 (4)	0.8329 (3)	0.0295 (16)
H21	0.2426	0.1249	0.7941	0.035
C21	0.1767 (8)	0.1368 (5)	0.8853 (4)	0.0279 (19)
H21A	0.1868	0.1860	0.9068	0.034
C22	0.1999 (8)	0.0686 (5)	0.9333 (3)	0.0249 (18)
O22	0.1728 (5)	0.0815 (3)	0.9896 (3)	0.0303 (13)
C23	0.0368 (9)	0.1484 (5)	0.8630 (4)	0.036 (2)
H23	0.0270	0.1912	0.8295	0.043
C24	0.0078 (10)	0.0752 (7)	0.8339 (5)	0.055 (3)
H24A	0.0704	0.0586	0.7991	0.082
H24B	-0.0789	0.0867	0.8176	0.082
H24C	0.0129	0.0326	0.8661	0.082
C25	-0.0564 (9)	0.1766 (6)	0.9167 (4)	0.042 (2)
H25A	-0.0346	0.2240	0.9344	0.063
H25B	-0.0519	0.1350	0.9497	0.063
H25C	-0.1436	0.1890	0.9012	0.063
N31	0.2510 (7)	-0.0034 (4)	0.9131 (3)	0.0312 (16)
H31	0.2696	-0.0099	0.8724	0.037
C31	0.2774 (8)	-0.0730 (5)	0.9566 (4)	0.0279 (18)
C32	0.3666 (9)	-0.0568 (5)	1.0065 (4)	0.032 (2)
O32	0.3511 (6)	-0.0763 (4)	1.0627 (3)	0.0420 (16)
C33	0.3488 (10)	-0.1422 (5)	0.9184 (4)	0.039 (2)
H33A	0.3676	-0.1892	0.9461	0.058
H33B	0.4293	-0.1294	0.9003	0.058
H33C	0.2954	-0.1525	0.8842	0.058
C34	0.1539 (10)	-0.0923 (6)	0.9864 (5)	0.044 (2)
H34A	0.1739	-0.1385	1.0149	0.065
H34B	0.0995	-0.1040	0.9531	0.065
H34C	0.1084	-0.0470	1.0104	0.065
N41	0.4649 (7)	-0.0232 (4)	0.9862 (3)	0.0298 (16)
H41	0.4735	-0.0118	0.9456	0.036
C41	0.5588 (8)	-0.0048 (6)	1.0288 (4)	0.034 (2)
H41A	0.5871	-0.0526	1.0562	0.041
C42	0.5006 (8)	0.0616 (5)	1.0708 (4)	0.0296 (19)
O42	0.5123 (6)	0.0586 (4)	1.1275 (3)	0.0333 (14)
C43	0.6766 (8)	0.0129 (6)	0.9908 (4)	0.036 (2)
H43	0.6467	0.0580	0.9609	0.044
C44	0.7700 (9)	0.0387 (6)	1.0341 (4)	0.040 (2)
H44A	0.7257	0.0838	1.0587	0.060
H44B	0.8412	0.0543	1.0086	0.060
H44C	0.8036	-0.0051	1.0629	0.060
C45	0.7416 (10)	-0.0570 (7)	0.9516 (4)	0.048 (3)
H45A	0.6791	-0.0724	0.9241	0.072
H45B	0.7750	-0.1016	0.9798	0.072
H45C	0.8125	-0.0421	0.9255	0.072
N51	0.4382 (7)	0.1275 (4)	1.0407 (3)	0.0314 (17)
H51	0.4312	0.1274	0.9995	0.038
C51	0.3824 (8)	0.1984 (5)	1.0756 (4)	0.0290 (19)
H51A	0.4534	0.2187	1.0951	0.035
C52	0.2908 (8)	0.1768 (5)	1.1289 (4)	0.0295 (19)
O52	0.2886 (6)	0.2036 (3)	1.1806 (3)	0.0327 (14)
C53	0.3138 (9)	0.2627 (5)	1.0319 (4)	0.033 (2)
H53	0.2492	0.2413	1.0081	0.040
C54	0.4103 (11)	0.2905 (6)	0.9857 (4)	0.047 (3)
H54A	0.3656	0.3319	0.9576	0.071
H54B	0.4542	0.2459	0.9604	0.071
H54C	0.4734	0.3116	1.0090	0.071
C55	0.2449 (11)	0.3323 (5)	1.0719 (4)	0.048 (3)
H55A	0.1827	0.3140	1.1018	0.072
H55B	0.2001	0.3739	1.0441	0.072
H55C	0.3081	0.3532	1.0954	0.072
N61	0.2073 (7)	0.1295 (4)	1.1146 (3)	0.0298 (16)
H61	0.2133	0.1088	1.0768	0.036
C61	0.1101 (8)	0.1126 (5)	1.1590 (4)	0.0286 (19)
C62	0.1665 (8)	0.0806 (5)	1.2225 (4)	0.031 (2)
O62	0.1195 (6)	0.0995 (3)	1.2728 (3)	0.0370 (15)
C63	0.0449 (9)	0.0499 (6)	1.1319 (4)	0.037 (2)
H63A	-0.0221	0.0379	1.1622	0.056
H63B	0.1087	0.0017	1.1242	0.056
H63C	0.0061	0.0697	1.0921	0.056
C64	0.0078 (8)	0.1875 (5)	1.1710 (4)	0.035 (2)
H64A	-0.0582	0.1751	1.2015	0.053
H64B	-0.0318	0.2066	1.1311	0.053
H64C	0.0485	0.2286	1.1879	0.053
N71	0.2742 (7)	0.0224 (4)	1.2148 (3)	0.0318 (17)
H71	0.3057	0.0081	1.1768	0.038
C71	0.3334 (8)	-0.0141 (5)	1.2707 (4)	0.0289 (19)
H71A	0.2662	-0.0325	1.2990	0.035
C72	0.3948 (8)	0.0437 (5)	1.3068 (4)	0.0299 (19)
O72	0.3800 (6)	0.0484 (4)	1.3635 (3)	0.0391 (15)
C73	0.4375 (9)	-0.0875 (5)	1.2514 (4)	0.035 (2)
H73	0.5019	-0.0708	1.2203	0.042
C74	0.3732 (12)	-0.1497 (6)	1.2219 (5)	0.056 (3)
H74A	0.3292	-0.1270	1.1840	0.084
H74B	0.3108	-0.1661	1.2526	0.084
H74C	0.4387	-0.1957	1.2102	0.084
C75	0.5055 (11)	-0.1256 (7)	1.3107 (5)	0.058 (3)

H75A	0.5474	-0.0871	1.3305	0.086	H12C	0.3034	0.3569	1.5501	0.082
H75B	0.5701	-0.1717	1.2984	0.086	C124	0.5346(11)	0.3456(7)	1.4880(5)	0.050(3)
H75C	0.4421	-0.1422	1.3408	0.086	H12D	0.5516	0.3971	1.4999	0.074
N81	0.4618(7)	0.0878(4)	1.2721(3)	0.0315(17)	H12E	0.4655	0.3534	1.4581	0.074
H81	0.4697	0.0820	1.2309	0.038	H12F	0.6126	0.3146	1.4682	0.074
C81	0.5234(10)	0.1464(7)	1.3016(4)	0.044(2)	O125	0.7015(7)	0.2317(4)	1.5722(3)	0.0475(17)
H81A	0.5871	0.1183	1.3319	0.053	C125	0.8110(11)	0.2155(8)	1.6128(6)	0.064(3)
C82	0.4213(10)	0.2030(6)	1.3385(4)	0.041(2)	H12G	0.8755	0.1723	1.5953	0.097
O82	0.4428(7)	0.2228(4)	1.3924(3)	0.0497(18)	H12H	0.7825	0.2002	1.6553	0.097
C83	0.5937(10)	0.1883(7)	1.2517(4)	0.049(3)	H12I	0.8487	0.2630	1.6151	0.097
H83	0.5321	0.2110	1.2186	0.059					
C84	0.7047(12)	0.1305(8)	1.2201(5)	0.067(3)					
H84A	0.6712	0.0871	1.2021	0.100	<b>Molecule-B</b>				
H84B	0.7674	0.1091	1.2517	0.100	C1	-0.1022(10)	0.8202(6)	0.1709(5)	0.044(2)
H84C	0.7462	0.1582	1.1864	0.100	C2	-0.2123(10)	0.8869(7)	0.1883(5)	0.053(3)
C85	0.6457(13)	0.2542(7)	1.2790(5)	0.062(3)	H2A	-0.1839	0.9377	0.1820	0.079
H85A	0.6908	0.2802	1.2455	0.094	H2B	-0.2394	0.8807	0.2328	0.079
H85B	0.7057	0.2330	1.3119	0.094	H2C	-0.2845	0.8856	0.1615	0.079
H85C	0.5749	0.2927	1.2976	0.094	C3	0.0144(10)	0.8203(6)	0.2073(6)	0.054(3)
N91	0.3127(8)	0.2326(4)	1.3109(3)	0.0369(18)	H3A	0.0430	0.8709	0.2001	0.081
H91	0.3010	0.2141	1.2738	0.044	H3B	0.0829	0.7771	0.1931	0.081
C91	0.2106(10)	0.2937(5)	1.3371(4)	0.041(2)	H3C	-0.0057	0.8129	0.2525	0.081
C92	0.1750(11)	0.2682(6)	1.4033(4)	0.047(3)	C4	-0.0683(11)	0.8216(7)	0.1008(5)	0.055(3)
O92	0.1534(8)	0.3139(4)	1.4478(3)	0.055(2)	H4A	-0.0370	0.8704	0.0893	0.083
C93	0.0979(11)	0.3039(6)	1.2977(4)	0.046(3)	H4B	-0.1448	0.8195	0.0772	0.083
H93A	0.0300	0.3449	1.3155	0.069	H4C	-0.0012	0.7759	0.0905	0.083
H93B	0.0667	0.2540	1.2967	0.069	O1	-0.1479(6)	0.7432(4)	0.1811(3)	0.0408(15)
H93C	0.1219	0.3198	1.2546	0.069	C5	-0.1808(9)	0.7194(6)	0.2398(4)	0.040(2)
C94	0.2622(15)	0.3714(6)	1.3395(5)	0.067(4)	O5	-0.1835(6)	0.7552(4)	0.2864(3)	0.0406(16)
H94A	0.1947	0.4129	1.3570	0.100	N11	-0.2121(8)	0.6468(5)	0.2368(3)	0.0401(19)
H94B	0.2882	0.3871	1.2967	0.100	H11	-0.2071	0.6228	0.2005	0.048
H94C	0.3364	0.3635	1.3664	0.100	C11	-0.2542(9)	0.6094(5)	0.2946(4)	0.036(2)
N101	0.1521(8)	0.1929(4)	1.4106(3)	0.0360(18)	H11A	-0.3332	0.6445	0.3120	0.043
H101	0.1702	0.1602	1.3789	0.043	C12	-0.1530(9)	0.5997(5)	0.3447(4)	0.033(2)
C101	0.0986(9)	0.1660(5)	1.4697(4)	0.034(2)	O12	-0.1930(6)	0.5998(3)	0.4001(3)	0.0371(15)
H10A	0.0428	0.2135	1.4888	0.040	C13	-0.2910(10)	0.5285(6)	0.2792(4)	0.043(2)
C102	0.1985(8)	0.1353(5)	1.5175(4)	0.033(2)	H13	-0.2262	0.5027	0.2468	0.052
O102	0.1708(7)	0.1323(4)	1.5743(3)	0.0451(17)	C14	-0.4179(12)	0.5436(9)	0.2496(5)	0.071(4)
C103	0.0120(10)	0.1063(6)	1.4616(4)	0.042(2)	H14A	-0.4157	0.5802	0.2133	0.107
H103	-0.0198	0.0918	1.5048	0.051	H14B	-0.4845	0.5670	0.2806	0.107
C104	0.0832(11)	0.0299(6)	1.4312(5)	0.048(3)	H14C	-0.4369	0.4937	0.2353	0.107
H10B	0.1572	0.0071	1.4562	0.073	C15	-0.2876(15)	0.4731(9)	0.3350(6)	0.078(4)
H10C	0.1129	0.0418	1.3880	0.073	H15A	-0.2025	0.4649	0.3530	0.116
H10D	0.0251	-0.0079	1.4299	0.073	H15B	-0.3052	0.4223	0.3217	0.116
C105	-0.1038(11)	0.1450(8)	1.4255(6)	0.063(3)	H15C	-0.3528	0.4956	0.3671	0.116
H10E	-0.1598	0.1067	1.4202	0.095	N21	-0.0309(7)	0.5954(4)	0.3282(3)	0.0340(17)
H10F	-0.0755	0.1633	1.3838	0.095	H21	-0.0060	0.5939	0.2879	0.041
H10G	-0.1512	0.1901	1.4491	0.095	C21	0.0619(9)	0.5932(5)	0.3757(4)	0.035(2)
N111	0.3244(7)	0.1118(4)	1.4960(3)	0.0305(16)	H21A	0.0604	0.5435	0.4012	0.042
H111	0.3428	0.1094	1.4550	0.037	C22	0.0266(9)	0.6588(5)	0.4203(4)	0.037(2)
C111	0.4264(9)	0.0910(5)	1.5398(4)	0.033(2)	O22	0.0556(6)	0.6480(4)	0.4771(3)	0.0389(15)
H11B	0.3981	0.0573	1.5750	0.039	C23	0.1955(9)	0.5860(6)	0.3475(5)	0.046(2)
C112	0.4573(9)	0.1661(5)	1.5672(4)	0.032(2)	H23	0.2091	0.5424	0.3165	0.055
O112	0.4712(6)	0.1694(4)	1.6235(3)	0.0392(15)	C24	0.2956(10)	0.5634(7)	0.3987(5)	0.056(3)
C113	0.5465(9)	0.0438(6)	1.5045(4)	0.038(2)	H24A	0.3821	0.5590	0.3792	0.084
H113	0.5635	0.0727	1.4642	0.046	H24B	0.2861	0.5126	0.4186	0.084
C114	0.5237(10)	-0.0374(6)	1.4893(5)	0.043(2)	H24C	0.2821	0.6042	0.4309	0.084
H11C	0.4487	-0.0322	1.4631	0.064	C25	0.2205(11)	0.6605(7)	0.3124(6)	0.062(3)
H11D	0.5083	-0.0662	1.5287	0.064	H25A	0.3093	0.6517	0.2953	0.093
H11E	0.5993	-0.0663	1.4662	0.064	H25B	0.2068	0.7045	0.3417	0.093
C115	0.6637(10)	0.0354(7)	1.5453(5)	0.050(3)	H25C	0.1616	0.6731	0.2777	0.093
H11F	0.6788	0.0879	1.5553	0.075	N31	-0.0308(7)	0.7295(4)	0.3985(3)	0.0306(16)
H11G	0.7392	0.0063	1.5222	0.075	H31	-0.0487	0.7352	0.3583	0.037
H11H	0.6482	0.0064	1.5847	0.075	C31	-0.0657(8)	0.7990(5)	0.4399(4)	0.031(2)
N121	0.4709(7)	0.2256(4)	1.5261(3)	0.0334(17)	C32	-0.1539(8)	0.7774(5)	0.4954(4)	0.031(2)
H121	0.4653	0.2186	1.4853	0.040	O32	-0.1442(6)	0.8009(4)	0.5492(3)	0.0420(16)
C121	0.4946(9)	0.3016(5)	1.5471(4)	0.037(2)	C33	-0.1416(10)	0.8652(5)	0.4000(4)	0.039(2)
C122	0.6068(10)	0.2895(6)	1.5910(5)	0.044(2)	H33A	-0.1667	0.9125	0.4255	0.059
O122	0.6103(7)	0.3296(4)	1.6359(3)	0.0510(18)	H33B	-0.2186	0.8486	0.3856	0.059
C123	0.3731(11)	0.3475(7)	1.5798(5)	0.055(3)	H33C	-0.0882	0.8771	0.3633	0.059
H12A	0.3895	0.3982	1.5937	0.082	C34	0.0523(9)	0.8236(6)	0.4623(5)	0.041(2)
H12B	0.3483	0.3168	1.6165	0.082	H34A	0.0273	0.8694	0.4895	0.061
					H34B	0.1045	0.8376	0.4258	0.061

H34C	0.1023	0.7799	0.4864	0.061	H84B	-0.5082	0.5495	0.7651	0.097
N41	-0.2472 (6)	0.7392 (4)	0.4816 (3)	0.0289 (16)	H84C	-0.4685	0.4984	0.7030	0.097
H41	-0.2555	0.7289	0.4417	0.035	C85	-0.3417 (13)	0.4190 (8)	0.7993 (6)	0.069 (4)
C41	-0.3345 (8)	0.7138 (5)	0.5282 (4)	0.0310 (19)	H85A	-0.2626	0.3925	0.8189	0.104
H41A	-0.3719	0.7603	0.5547	0.037	H85B	-0.3694	0.3830	0.7702	0.104
C42	-0.2646 (8)	0.6485 (5)	0.5725 (4)	0.0247 (17)	H85C	-0.4091	0.4341	0.8323	0.104
O42	-0.2803 (6)	0.6507 (3)	0.6298 (3)	0.0319 (13)	N91	-0.0447 (8)	0.4880 (4)	0.8117 (3)	0.0353 (18)
C43	-0.4437 (9)	0.6864 (5)	0.4982 (4)	0.037 (2)	H91	-0.0395	0.5053	0.7723	0.042
H43	-0.4057	0.6481	0.4647	0.044	C91	0.0697 (10)	0.4404 (5)	0.8394 (4)	0.041 (2)
C44	-0.5217 (9)	0.6437 (6)	0.5446 (5)	0.043 (2)	C92	0.1022 (10)	0.4794 (5)	0.8998 (4)	0.041 (2)
H44A	-0.5912	0.6272	0.5226	0.065	O92	0.1362 (9)	0.4373 (5)	0.9462 (3)	0.069 (2)
H44B	-0.5583	0.6793	0.5787	0.065	C93	0.1850 (10)	0.4408 (6)	0.7921 (5)	0.046 (2)
H44C	-0.4661	0.5971	0.5624	0.065	H93A	0.2625	0.4093	0.8097	0.069
C45	-0.5288 (10)	0.7554 (6)	0.4657 (5)	0.054 (3)	H93B	0.1975	0.4953	0.7844	0.069
H45A	-0.5994	0.7367	0.4464	0.080	H93C	0.1680	0.4182	0.7521	0.069
H45B	-0.4781	0.7785	0.4329	0.080	C94	0.0493 (14)	0.3561 (6)	0.8559 (5)	0.065 (3)
H45C	-0.5639	0.7954	0.4970	0.080	H94A	0.1270	0.3256	0.8743	0.098
N51	-0.1910 (7)	0.5874 (4)	0.5446 (3)	0.0296 (16)	H94B	0.0314	0.3306	0.8174	0.098
H51	-0.1807	0.5871	0.5031	0.036	H94C	-0.0234	0.3581	0.8865	0.098
C51	-0.1272 (8)	0.5207 (5)	0.5824 (4)	0.0272 (18)	N101	0.0923 (7)	0.5567 (5)	0.8970 (4)	0.0396 (19)
H51A	-0.1942	0.4989	0.6083	0.033	H101	0.0594	0.5842	0.8639	0.048
C52	-0.0389 (7)	0.5485 (5)	0.6267 (4)	0.029 (2)	C101	0.1368 (10)	0.5967 (6)	0.9499 (5)	0.050 (3)
O52	-0.0284 (6)	0.5192 (3)	0.6806 (3)	0.0308 (13)	H10A	0.2099	0.5587	0.9681	0.059
C53	-0.0529 (8)	0.4543 (5)	0.5396 (4)	0.032 (2)	C102	0.0353 (11)	0.6149 (6)	1.0023 (5)	0.049 (3)
H53	0.0091	0.4766	0.5107	0.039	O102	0.0701 (8)	0.6234 (5)	1.0557 (4)	0.072 (2)
C54	0.0210 (10)	0.3882 (5)	0.5807 (4)	0.041 (2)	C103	0.1911 (10)	0.6714 (7)	0.9271 (6)	0.061 (3)
H54A	0.0811	0.4097	0.6059	0.061	H103	0.2238	0.6941	0.9646	0.074
H54B	0.0689	0.3468	0.5535	0.061	C104	0.0880 (11)	0.7319 (7)	0.9004 (6)	0.063 (3)
H54C	-0.0394	0.3659	0.6090	0.061	H10B	0.0185	0.7459	0.9325	0.095
C55	-0.1463 (10)	0.4215 (6)	0.5004 (5)	0.046 (2)	H10C	0.0547	0.7108	0.8635	0.095
H55A	-0.1935	0.4641	0.4741	0.068	H10D	0.1228	0.7791	0.8876	0.095
H55B	-0.2070	0.3992	0.5285	0.068	C105	0.3060 (12)	0.6455 (8)	0.8794 (6)	0.068 (3)
H55C	-0.0987	0.3801	0.4731	0.068	H10E	0.3709	0.6056	0.8995	0.102
N61	0.0283 (6)	0.6031 (4)	0.6057 (3)	0.0307 (16)	H10F	0.3438	0.6915	0.8663	0.102
H61	0.0199	0.6203	0.5662	0.037	H10G	0.2758	0.6231	0.8422	0.102
C61	0.1138 (8)	0.6352 (5)	0.6443 (4)	0.033 (2)	N111	-0.0877 (8)	0.6205 (5)	0.9902 (3)	0.042 (2)
C62	0.0476 (8)	0.6585 (5)	0.7079 (4)	0.0286 (19)	H111	-0.1091	0.6146	0.9512	0.050
O62	0.0927 (6)	0.6440 (4)	0.7592 (3)	0.0380 (15)	C111	-0.1876 (10)	0.6360 (6)	1.0399 (4)	0.043 (2)
C63	0.2355 (9)	0.5727 (6)	0.6554 (4)	0.038 (2)	H11B	-0.1517	0.6642	1.0734	0.052
H63A	0.2932	0.5948	0.6816	0.057	C112	-0.2204 (10)	0.5615 (6)	1.0717 (4)	0.043 (3)
H63B	0.2793	0.5573	0.6147	0.057	O112	-0.2530 (7)	0.5614 (4)	1.1277 (3)	0.0457 (17)
H63C	0.2114	0.5262	0.6771	0.057	C113	-0.3071 (12)	0.6952 (8)	1.0154 (5)	0.065 (3)
C64	0.1518 (9)	0.7078 (5)	0.6115 (4)	0.038 (2)	H113	-0.2743	0.7378	0.9902	0.078
H64A	0.2098	0.7292	0.6380	0.058	C114	-0.3773 (13)	0.6582 (7)	0.9751 (6)	0.071 (4)
H64B	0.0747	0.7479	0.6048	0.058	H11C	-0.3204	0.6338	0.9405	0.107
H64C	0.1953	0.6930	0.5706	0.058	H11D	-0.4467	0.6975	0.9577	0.107
N71	-0.0738 (7)	0.7061 (4)	0.7024 (3)	0.0319 (17)	H11E	-0.4140	0.6175	0.9990	0.107
H71	-0.1062	0.7182	0.6650	0.038	C115	-0.3870 (16)	0.7323 (10)	1.0675 (7)	0.093 (5)
C71	-0.1454 (8)	0.7352 (5)	0.7602 (4)	0.032 (2)	H11F	-0.3350	0.7575	1.0947	0.139
H71A	-0.0877	0.7611	0.7851	0.038	H11G	-0.4237	0.6922	1.0922	0.139
C72	-0.1836 (8)	0.6703 (5)	0.8008 (4)	0.0270 (18)	H11H	-0.4565	0.7723	1.0509	0.139
O72	-0.1719 (6)	0.6673 (4)	0.8575 (3)	0.0385 (15)	N121	-0.2120 (9)	0.4973 (5)	1.0354 (4)	0.051 (2)
C73	-0.2631 (9)	0.7999 (5)	0.7425 (4)	0.039 (2)	H121	-0.1894	0.5003	0.9950	0.062
H73	-0.3171	0.7758	0.7141	0.047	C121	-0.2397 (12)	0.4239 (6)	1.0623 (5)	0.055 (3)
C74	-0.3423 (12)	0.8252 (7)	0.8016 (5)	0.059 (3)	C122	-0.3792 (14)	0.4382 (7)	1.0930 (6)	0.064 (3)
H74A	-0.3667	0.7788	0.8233	0.088	O122	-0.4156 (11)	0.3986 (6)	1.1326 (5)	0.096 (3)
H74B	-0.4198	0.8627	0.7904	0.088	C123	-0.2419 (16)	0.3700 (8)	1.0072 (6)	0.085 (4)
H74C	-0.2920	0.8505	0.8296	0.088	H12A	-0.2605	0.3192	1.0232	0.127
C75	-0.2234 (12)	0.8700 (6)	0.7075 (5)	0.055 (3)	H12B	-0.1582	0.3615	0.9844	0.127
H75A	-0.1720	0.8520	0.6692	0.082	H12C	-0.3086	0.3945	0.9785	0.127
H75B	-0.1723	0.8956	0.7349	0.082	C124	-0.1546 (13)	0.3860 (7)	1.1118 (7)	0.076 (4)
H75C	-0.3001	0.9079	0.6957	0.082	H12D	-0.1816	0.3370	1.1267	0.115
N81	-0.2355 (7)	0.6157 (4)	0.7705 (3)	0.0330 (17)	H12E	-0.1596	0.4219	1.1472	0.115
H81	-0.2479	0.6205	0.7296	0.040	H12F	-0.0661	0.3740	1.0944	0.115
C81	-0.2696 (9)	0.5497 (5)	0.8073 (4)	0.035 (2)	O125	-0.4540 (9)	0.4950 (5)	1.0597 (5)	0.082 (3)
H81A	-0.3419	0.5709	0.8378	0.042	C125	-0.5889 (17)	0.5130 (12)	1.0844 (10)	0.115 (6)
C82	-0.1584 (10)	0.5060 (5)	0.8451 (4)	0.036 (2)	H12G	-0.6379	0.5547	1.0581	0.172
O82	-0.1718 (7)	0.4878 (4)	0.8999 (3)	0.0488 (18)	H12H	-0.5915	0.5307	1.1281	0.172
C83	-0.3171 (10)	0.4922 (6)	0.7631 (4)	0.045 (2)	H12I	-0.6267	0.4653	1.0834	0.172
H83	-0.2494	0.4760	0.7291	0.054					
C84	-0.4406 (11)	0.5342 (8)	0.7322 (5)	0.065 (3)					
H84A	-0.4240	0.5816	0.7088	0.097					

**Table S3.** Bond lengths (Å) & angles (°)\*.

**Lengths**

**Solvents**

O1M - C1M	1.460 (12)
O2M - C2M	1.339 (17)
O3M - C3M	1.62 (4)

**Molecule A**

C1 - C2	1.517 (14)
C1 - C3	1.508 (13)
C1 - C4	1.531 (13)
C1 - O1	1.471 (12)
O1 - C5	1.312 (11)
C5 - O5	1.234 (10)
C5 - N11	1.362 (12)
N11 - C11	1.463 (11)
C11 - C12	1.508 (12)
C11 - C13	1.524 (14)
C12 - O12	1.221 (11)
C12 - N21	1.324 (11)
C13 - C14	1.531 (13)
C13 - C15	1.506 (15)
N21 - C21	1.440 (11)
C21 - C22	1.521 (11)
C21 - C23	1.554 (13)
C22 - O22	1.230 (9)
C22 - N31	1.332 (10)
C23 - C24	1.509 (16)
C23 - C25	1.501 (12)
N31 - C31	1.481 (11)
C31 - C32	1.517 (13)
C31 - C33	1.521 (12)
C31 - C34	1.516 (14)
C32 - O32	1.237 (11)
C32 - N41	1.333 (12)
N41 - C41	1.459 (12)
C41 - C42	1.493 (12)
C41 - C43	1.528 (13)
C42 - O42	1.211 (11)
C42 - N51	1.359 (10)
C43 - C44	1.515 (14)
C43 - C45	1.521 (14)
N51 - C51	1.461 (11)
C51 - C52	1.537 (12)
C51 - C53	1.520 (12)
C52 - O52	1.199 (11)
C52 - N61	1.361 (12)
C53 - C54	1.515 (14)
C53 - C55	1.538 (12)
N61 - C61	1.427 (11)
C61 - C62	1.541 (12)
C61 - C63	1.527 (14)
C61 - C64	1.542 (11)
C62 - O62	1.183 (10)
C62 - N71	1.379 (10)
N71 - C71	1.437 (11)
C71 - C72	1.529 (13)
C71 - C73	1.566 (11)
C72 - O72	1.206 (11)
C72 - N81	1.319 (12)
C73 - C74	1.537 (16)
C73 - C75	1.543 (14)
N81 - C81	1.471 (14)
C81 - C82	1.519 (13)
C81 - C83	1.508 (15)
C82 - O82	1.244 (11)
C82 - N91	1.324 (13)

C83 - C84	1.534 (15)
C83 - C85	1.495 (18)
N91 - C91	1.464 (11)
C91 - C92	1.507 (12)
C91 - C93	1.470 (15)
C91 - C94	1.542 (16)
C92 - O92	1.232 (11)
C92 - N101	1.367 (13)
N101 - C101	1.448 (11)
C101 - C102	1.511 (12)
C101 - C103	1.521 (15)
C102 - O102	1.226 (11)
C102 - N111	1.381 (11)
C103 - C104	1.534 (14)
C103 - C105	1.512 (15)
N111 - C111	1.445 (11)
C111 - C112	1.531 (13)
C111 - C113	1.550 (12)
C112 - O112	1.212 (11)
C112 - N121	1.348 (11)
C113 - C114	1.511 (15)
C113 - C115	1.529 (14)
N121 - C121	1.465 (12)
C121 - C122	1.524 (14)
C121 - C123	1.528 (14)
C121 - C124	1.526 (14)
C122 - O122	1.198 (13)
C122 - O125	1.331 (12)
O125 - C125	1.457 (14)

**Molecule B**

C1 - C2	1.518 (14)
C1 - C3	1.488 (16)
C1 - C4	1.510 (15)
C1 - O1	1.502 (13)
O1 - C5	1.347 (11)
C5 - O5	1.176 (11)
C5 - N11	1.357 (14)
N11 - C11	1.455 (11)
C11 - C12	1.528 (13)
C11 - C13	1.564 (14)
C12 - O12	1.228 (11)
C12 - N21	1.315 (12)
C13 - C14	1.487 (16)
C13 - C15	1.492 (16)
N21 - C21	1.435 (12)
C21 - C22	1.478 (12)
C21 - C23	1.497 (13)
C22 - O22	1.254 (11)
C22 - N31	1.334 (10)
C23 - C24	1.543 (15)
C23 - C25	1.523 (16)
N31 - C31	1.486 (11)
C31 - C32	1.547 (12)
C31 - C33	1.524 (12)
C31 - C34	1.497 (14)
C32 - O32	1.236 (11)
C32 - N41	1.335 (12)
N41 - C41	1.436 (11)
C41 - C42	1.543 (11)
C41 - C43	1.504 (14)
C42 - O42	1.217 (11)
C42 - N51	1.324 (10)
C43 - C44	1.516 (14)
C43 - C45	1.519 (13)
N51 - C51	1.456 (10)
C51 - C52	1.505 (13)
C51 - C53	1.553 (11)
C52 - O52	1.234 (10)
C52 - N61	1.337 (11)
C53 - C54	1.528 (12)
C53 - C55	1.519 (15)
N61 - C61	1.443 (12)

C61 - C62	1.518 (12)
C61 - C63	1.541 (12)
C61 - C64	1.522 (13)
C62 - O62	1.207 (11)
C62 - N71	1.399 (10)
N71 - C71	1.461 (10)
C71 - C72	1.493 (12)
C71 - C73	1.561 (11)
C72 - O72	1.211 (11)
C72 - N81	1.366 (12)
C73 - C74	1.503 (14)
C73 - C75	1.513 (14)
N81 - C81	1.450 (11)
C81 - C82	1.522 (13)
C81 - C83	1.550 (14)
C82 - O82	1.201 (11)
C82 - N91	1.358 (12)
C83 - C84	1.537 (15)
C83 - C85	1.513 (17)
N91 - C91	1.467 (12)
C91 - C92	1.545 (13)
C91 - C93	1.545 (14)
C91 - C94	1.536 (14)
C92 - O92	1.229 (11)
C92 - N101	1.316 (12)
N101 - C101	1.474 (14)
C101 - C102	1.507 (15)
C101 - C103	1.560 (17)
C102 - O102	1.227 (14)
C102 - N111	1.327 (15)
C103 - C104	1.482 (15)
C103 - C105	1.553 (16)
N111 - C111	1.452 (12)
C111 - C112	1.521 (15)
C111 - C113	1.569 (15)
C112 - O112	1.219 (11)
C112 - N121	1.354 (13)
C113 - C114	1.401 (19)
C113 - C115	1.448 (19)
N121 - C121	1.445 (14)
C121 - C122	1.567 (19)
C121 - C123	1.517 (17)
C121 - C124	1.471 (18)
C122 - O122	1.162 (17)
C122 - O125	1.342 (15)
O125 - C125	1.48 (2)

**Angles**

**Molecule A**

C2 -C1 -C3	112.1 (8)
C2 -C1 -C4	110.0 (8)
C2 -C1 -O1	101.8 (7)
C3 -C1 -C4	112.3 (8)
C3 -C1 -O1	109.2 (7)
C4 -C1 -O1	111.1 (7)
C1 -O1 -C5	121.1 (7)
O1 -C5 -O5	125.3 (8)
O1 -C5 -N11	111.1 (8)
O5 -C5 -N11	123.6 (8)
C5 -N11 -C11	119.5 (7)
N11 -C11 -C12	113.6 (7)
N11 -C11 -C13	108.7 (7)
C12 -C11 -C13	111.8 (7)
C11 -C12 -O12	119.4 (8)
C11 -C12 -N21	118.8 (8)
O12 -C12 -N21	121.8 (8)
C11 -C13 -C14	112.7 (8)
C11 -C13 -C15	112.1 (8)
C14 -C13 -C15	109.7 (8)
C12 -N21 -C21	120.8 (7)
N21 -C21 -C22	111.2 (7)

N21 -C21 -C23	111.8 (7)
C22 -C21 -C23	109.7 (7)
C21 -C22 -O22	119.3 (6)
C21 -C22 -N31	118.8 (7)
O22 -C22 -N31	121.9 (7)
C21 -C23 -C24	112.6 (8)
C21 -C23 -C25	110.0 (8)
C24 -C23 -C25	111.9 (8)
C22 -N31 -C31	122.4 (7)
N31 -C31 -C32	108.9 (7)
N31 -C31 -C33	107.7 (7)
N31 -C31 -C34	111.1 (7)
C32 -C31 -C33	107.3 (7)
C32 -C31 -C34	111.4 (8)
C33 -C31 -C34	110.4 (8)
C31 -C32 -O32	121.6 (8)
C31 -C32 -N41	116.5 (8)
O32 -C32 -N41	121.9 (8)
C32 -N41 -C41	122.4 (8)
N41 -C41 -C42	111.1 (7)
N41 -C41 -C43	110.1 (7)
C42 -C41 -C43	111.9 (7)
C41 -C42 -O42	122.7 (8)
C41 -C42 -N51	115.3 (8)
O42 -C42 -N51	121.9 (8)
C41 -C43 -C44	110.6 (7)
C41 -C43 -C45	111.9 (7)
C44 -C43 -C45	111.2 (8)
C42 -N51 -C51	121.2 (7)
N51 -C51 -C52	109.3 (7)
N51 -C51 -C53	111.2 (7)
C52 -C51 -C53	111.2 (7)
C51 -C52 -O52	121.2 (8)
C51 -C52 -N61	117.8 (7)
O52 -C52 -N61	120.9 (8)
C51 -C53 -C54	109.8 (7)
C51 -C53 -C55	109.0 (7)
C54 -C53 -C55	109.7 (8)
C52 -N61 -C61	121.9 (7)
N61 -C61 -C62	111.7 (7)
N61 -C61 -C63	108.9 (7)
N61 -C61 -C64	110.4 (7)
C62 -C61 -C63	108.2 (7)
C62 -C61 -C64	109.0 (7)
C63 -C61 -C64	108.5 (7)
C61 -C62 -O62	124.6 (8)
C61 -C62 -N71	112.6 (7)
O62 -C62 -N71	122.7 (8)
C62 -N71 -C71	117.9 (7)
N71 -C71 -C72	111.6 (7)
N71 -C71 -C73	109.1 (7)
C72 -C71 -C73	109.9 (7)
C71 -C72 -O72	120.9 (8)
C71 -C72 -N81	116.0 (7)
O72 -C72 -N81	123.2 (8)
C71 -C73 -C74	109.8 (7)
C71 -C73 -C75	109.8 (8)
C74 -C73 -C75	107.8 (8)
C72 -N81 -C81	120.7 (8)
N81 -C81 -C82	108.7 (8)
N81 -C81 -C83	110.0 (9)
C82 -C81 -C83	112.4 (8)
C81 -C82 -O82	119.9 (8)
C81 -C82 -N91	118.4 (9)
O82 -C82 -N91	121.6 (8)
C81 -C83 -C84	110.8 (8)
C81 -C83 -C85	111.4 (10)
C84 -C83 -C85	109.0 (9)
C82 -N91 -C91	125.3 (8)
N91 -C91 -C92	108.4 (7)
N91 -C91 -C93	109.9 (8)
N91 -C91 -C94	108.5 (7)

C92 -C91 -C93	109.8 (7)	C32 -C31 -C33	108.8 (7)	O102-C102-N111	121.8 (10)
C92 -C91 -C94	109.4 (8)	C32 -C31 -C34	112.2 (7)	C101-C103-C104	110.3 (10)
C93 -C91 -C94	110.8 (9)	C33 -C31 -C34	110.1 (8)	C101-C103-C105	108.6 (9)
C91 -C92 -O92	123.1 (8)	C31 -C32 -O32	120.4 (8)	C104-C103-C105	113.1 (10)
C91 -C92 -N101	116.3 (8)	C31 -C32 -N41	117.4 (7)	C102-N111-C111	121.4 (9)
O92 -C92 -N101	120.2 (9)	O32 -C32 -N41	121.9 (8)	N111-C111-C112	113.6 (8)
C92 -N101-C101	121.0 (7)	C32 -N41 -C41	123.7 (7)	N111-C111-C113	110.5 (9)
N101-C101-C102	113.5 (7)	N41 -C41 -C42	111.4 (7)	C112-C111-C113	113.9 (9)
N101-C101-C103	113.7 (8)	N41 -C41 -C43	111.7 (7)	C111-C112-O112	119.9 (8)
C102-C101-C103	110.3 (8)	C42 -C41 -C43	110.4 (7)	C111-C112-N121	117.4 (9)
C101-C102-O102	121.8 (8)	C41 -C42 -O42	122.3 (8)	O112-C112-N121	122.7 (8)
C101-C102-N111	118.4 (8)	C41 -C42 -N51	116.2 (7)	C111-C113-C114	111.3 (10)
O102-C102-N111	119.8 (8)	O42 -C42 -N51	121.4 (8)	C111-C113-C115	111.2 (11)
C101-C103-C104	112.7 (8)	C41 -C43 -C44	112.9 (8)	C114-C113-C115	111.7 (11)
C101-C103-C105	109.3 (9)	C41 -C43 -C45	110.3 (8)	C112-N121-C121	120.7 (9)
C104-C103-C105	112.5 (9)	C44 -C43 -C45	111.0 (8)	N121-C121-C122	109.6 (9)
C102-N111-C111	120.9 (7)	C42 -N51 -C51	120.2 (7)	N121-C121-C123	106.4 (9)
N111-C111-C112	109.7 (7)	N51 -C51 -C52	109.6 (7)	N121-C121-C124	116.1 (9)
N111-C111-C113	109.0 (7)	N51 -C51 -C53	111.1 (7)	C122-C121-C123	105.7 (10)
C112-C111-C113	110.5 (7)	C52 -C51 -C53	111.1 (7)	C122-C121-C124	106.2 (10)
C111-C112-O112	119.9 (8)	C51 -C52 -O52	119.3 (8)	C123-C121-C124	112.3 (10)
C111-C112-N121	117.2 (7)	C51 -C52 -N61	118.7 (7)	C121-C122-O122	124.9 (13)
O112-C112-N121	122.9 (8)	O52 -C52 -N61	122.0 (8)	C121-C122-O125	109.1 (11)
C111-C113-C114	110.0 (8)	C51 -C53 -C54	109.6 (7)	O122-C122-O125	125.2 (12)
C111-C113-C115	110.3 (8)	C51 -C53 -C55	109.9 (7)	C122-O125-C125	113.7 (12)
C114-C113-C115	109.2 (8)	C54 -C53 -C55	109.7 (8)		
C112-N121-C121	122.0 (7)	C52 -N61 -C61	123.5 (7)		
N121-C121-C122	110.8 (7)	N61 -C61 -C62	109.8 (7)		
N121-C121-C123	109.9 (7)	N61 -C61 -C63	109.8 (7)		
N121-C121-C124	106.6 (7)	N61 -C61 -C64	110.0 (7)		
C122-C121-C123	110.8 (8)	C62 -C61 -C63	108.8 (7)		
C122-C121-C124	107.1 (8)	C62 -C61 -C64	109.1 (7)		
C123-C121-C124	111.6 (8)	C63 -C61 -C64	109.2 (7)		
C121-C122-O122	123.4 (9)	C61 -C62 -O62	126.5 (8)		
C121-C122-O125	112.2 (9)	C61 -C62 -N71	112.9 (7)		
O122-C122-O125	124.3 (9)	O62 -C62 -N71	120.3 (8)		
C122-O125-C125	115.3 (8)	C62 -N71 -C71	118.3 (7)		
		N71 -C71 -C72	112.5 (7)		
		N71 -C71 -C73	109.3 (7)		
		C72 -C71 -C73	112.3 (7)		
		C71 -C72 -O72	121.9 (8)		
		C71 -C72 -N81	116.2 (7)		
		O72 -C72 -N81	122.0 (8)		
		C71 -C73 -C74	109.1 (8)		
		C71 -C73 -C75	112.3 (7)		
		C74 -C73 -C75	111.1 (8)		
		C72 -N81 -C81	118.4 (7)		
		N81 -C81 -C82	112.2 (7)		
		N81 -C81 -C83	109.8 (7)		
		C82 -C81 -C83	110.3 (8)		
		C81 -C82 -O82	122.1 (8)		
		C81 -C82 -N91	114.8 (8)		
		O82 -C82 -N91	123.1 (8)		
		C81 -C83 -C84	109.7 (8)		
		C81 -C83 -C85	111.0 (9)		
		C84 -C83 -C85	109.9 (9)		
		C82 -N91 -C91	121.9 (8)		
		N91 -C91 -C92	110.1 (7)		
		N91 -C91 -C93	108.2 (8)		
		N91 -C91 -C94	111.2 (7)		
		C92 -C91 -C93	106.1 (7)		
		C92 -C91 -C94	109.3 (7)		
		C93 -C91 -C94	111.8 (8)		
		C91 -C92 -O92	119.0 (8)		
		C91 -C92 -N101	116.3 (8)		
		O92 -C92 -N101	124.7 (9)		
		C92 -N101-C101	119.2 (8)		
		N101-C101-C102	112.2 (9)		
		N101-C101-C103	112.0 (9)		
		C102-C101-C103	112.1 (9)		
		C101-C102-O102	118.1 (10)		
		C101-C102-N111	120.1 (10)		

**Molecule B**

C2 -C1 -C3	113.1 (9)
C2 -C1 -C4	111.3 (9)
C2 -C1 -O1	108.4 (8)
C3 -C1 -C4	109.9 (9)
C3 -C1 -O1	110.5 (8)
C4 -C1 -O1	103.2 (8)
C1 -O1 -C5	120.3 (7)
O1 -C5 -O5	126.3 (8)
O1 -C5 -N11	108.9 (8)
O5 -C5 -N11	124.8 (9)
C5 -N11 -C11	119.0 (8)
N11 -C11 -C12	111.7 (7)
N11 -C11 -C13	109.9 (7)
C12 -C11 -C13	111.7 (7)
C11 -C12 -O12	116.3 (8)
C11 -C12 -N21	120.7 (8)
O12 -C12 -N21	122.9 (8)
C11 -C13 -C14	109.0 (9)
C11 -C13 -C15	113.4 (9)
C14 -C13 -C15	112.3 (9)
C12 -N21 -C21	120.2 (8)
N21 -C21 -C22	112.4 (7)
N21 -C21 -C23	112.0 (8)
C22 -C21 -C23	113.3 (8)
C21 -C22 -O22	119.7 (8)
C21 -C22 -N31	119.0 (8)
O22 -C22 -N31	121.3 (8)
C21 -C23 -C24	110.9 (8)
C21 -C23 -C25	113.7 (9)
C24 -C23 -C25	108.8 (9)
C22 -N31 -C31	122.3 (7)
N31 -C31 -C32	108.3 (7)
N31 -C31 -C33	106.6 (7)
N31 -C31 -C34	110.7 (7)

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\*PARST: Nardelli, M.  
(1995). *J. Appl. Cryst.* 28,  
659.



**Table S4.** Torsion angles (°)\*.

<b>Molecule A</b>												
C5 O1 C1 C2	175.7 (8)	C5 O1 C1 C3	-65.7 (10)	C5 O1 C1 C4	58.7 (10)							
C1 O1 C5 O5	-2.0 (14)	C1 O1 C5 N11	175.4 (7)	C125 O125 C122 O122	3.9 (15)							
C125 O125 C122 C121	-178.6 (8)	O1 C5 N11 C11	-178.8 (7)	O5 C5 N11 C11	-1.4 (13)							
C12 C11 N11 C5	-57.7 (10)	C13 C11 N11 C5	177.1 (8)	N11 C11 C12 O12	158.1 (8)							
N11 C11 C12 N21	-20.5 (11)	C13 C11 C12 O12	-78.5 (10)	C13 C11 C12 N21	103.0 (9)							
N11 C11 C13 C14	75.4 (9)	N11 C11 C13 C15	-160.3 (8)	C12 C11 C13 C14	-50.8 (9)							
C12 C11 C13 C15	73.5 (10)	O12 C12 N21 C21	-0.3 (13)	C11 C12 N21 C21	178.2 (7)							
C22 C21 N21 C12	-56.1 (10)	C23 C21 N21 C12	-179.0 (7)	N21 C21 C22 O22	148.8 (8)							
N21 C21 C22 N31	-30.2 (11)	C23 C21 C22 O22	-87.1 (9)	C23 C21 C22 N31	93.9 (9)							
N21 C21 C23 C24	65.4 (9)	N21 C21 C23 C25	-169.0 (7)	C22 C21 C23 C24	-58.3 (9)							
C22 C21 C23 C25	67.2 (9)	O22 C22 N31 C31	0.7 (13)	C21 C22 N31 C31	179.7 (7)							
C32 C31 N31 C22	-57.6 (10)	C33 C31 N31 C22	-173.7 (8)	C34 C31 N31 C22	65.4 (10)							
N31 C31 C32 O32	139.0 (8)	N31 C31 C32 N41	-43.4 (10)	C33 C31 C32 O32	-104.8 (9)							
C33 C31 C32 N41	72.8 (9)	C34 C31 C32 O32	16.1 (12)	C34 C31 C32 N41	-166.3 (8)							
O32 C32 N41 C41	-1.9 (13)	C31 C32 N41 C41	-179.5 (8)	C42 C41 N41 C32	-70.1 (10)							
C43 C41 N41 C32	165.5 (8)	N41 C41 C42 O42	131.3 (9)	N41 C41 C42 N51	-51.6 (10)							
C43 C41 C42 O42	-105.2 (10)	C43 C41 C42 N51	71.8 (10)	N41 C41 C43 C44	175.3 (8)							
N41 C41 C43 C45	-60.1 (10)	C42 C41 C43 C44	51.3 (10)	C42 C41 C43 C45	175.9 (7)							
O42 C42 N51 C51	0.3 (13)	C41 C42 N51 C51	-176.8 (7)	C52 C51 N51 C42	-54.7 (10)							
C53 C51 N51 C42	-177.9 (8)	N51 C51 C52 O52	138.1 (8)	N51 C51 C52 N61	-45.4 (10)							
C53 C51 C52 O52	-98.8 (9)	C53 C51 C52 N61	77.8 (9)	N51 C51 C53 C54	-65.8 (9)							
N51 C51 C53 C55	174.0 (8)	C52 C51 C53 C54	172.1 (7)	C52 C51 C53 C55	51.9 (10)							
O52 C52 N61 C61	3.0 (12)	C51 C52 N61 C61	-173.6 (7)	C62 C61 N61 C52	-53.2 (10)							
C63 C61 N61 C52	-172.6 (8)	C64 C61 N61 C52	68.3 (10)	N61 C61 C62 O62	137.8 (9)							
N61 C61 C62 N71	-46.7 (10)	C63 C61 C62 O62	-102.3 (10)	C63 C61 C62 N71	73.2 (9)							
C64 C61 C62 O62	15.5 (12)	C64 C61 C62 N71	-169.0 (7)	O62 C62 N71 C71	-2.4 (12)							
C61 C62 N71 C71	-178.0 (7)	C72 C71 N71 C62	-68.2 (10)	C73 C71 N71 C62	170.1 (7)							
N71 C71 C72 O72	134.9 (8)	N71 C71 C72 N81	-44.1 (10)	C73 C71 C72 O72	-103.9 (9)							
C73 C71 C72 N81	77.1 (9)	N71 C71 C73 C74	-63.7 (9)	N71 C71 C73 C75	177.9 (8)							
C72 C71 C73 C74	173.6 (7)	C72 C71 C73 C75	55.3 (10)	O72 C72 N81 C81	0.0 (14)							
C71 C72 N81 C81	179.0 (8)	C82 C81 N81 C72	-56.7 (11)	C83 C81 N81 C72	179.9 (8)							
N81 C81 C82 O82	136.2 (9)	N81 C81 C82 N91	-46.6 (11)	C83 C81 C82 O82	-101.9 (10)							
C83 C81 C82 N91	75.4 (12)	N81 C81 C83 C84	-64.5 (11)	N81 C81 C83 C85	173.9 (9)							
C82 C81 C83 C84	174.3 (8)	C82 C81 C83 C85	52.7 (12)	O82 C82 N91 C91	3.9 (15)							
C81 C82 N91 C91	-173.4 (9)	C92 C91 N91 C82	-52.2 (12)	C93 C91 N91 C82	-172.3 (9)							
C94 C91 N91 C82	66.4 (11)	N91 C91 C92 O92	138.5 (11)	N91 C91 C92 N101	-49.2 (12)							
C93 C91 C92 O92	-101.4 (12)	C93 C91 C92 N101	70.9 (11)	C94 C91 C92 O92	20.4 (15)							
C94 C91 C92 N101	-167.4 (10)	O92 C92 N101 C101	1.9 (15)	C91 C92 N101 C101	-170.6 (9)							
C102 C101 N101 C92	-85.7 (11)	C103 C101 N101 C92	147.0 (9)	N101 C101 C102 O102	158.1 (8)							
N101 C101 C102 N111	-20.6 (11)	C103 C101 C102 O102	-73.0 (11)	C103 C101 C102 N111	108.4 (9)							
N101 C101 C103 C104	62.2 (10)	N101 C101 C103 C105	-63.7 (10)	C102 C101 C103 C104	-66.7 (9)							
C102 C101 C103 C105	167.4 (8)	O102 C102 N111 C111	-6.2 (12)	C101 C102 N111 C111	172.5 (7)							
C112 C111 N111 C102	-76.0 (10)	C113 C111 N111 C102	162.9 (7)	N111 C111 C112 O112	134.8 (9)							
N111 C111 C112 N121	-46.8 (11)	C113 C111 C112 O112	-105.0 (10)	C113 C111 C112 N121	73.4 (10)							
N111 C111 C113 C114	-70.9 (9)	N111 C111 C113 C115	168.5 (8)	C112 C111 C113 C114	168.5 (7)							
C112 C111 C113 C115	47.9 (10)	O112 C112 N121 C121	-4.5 (14)	C111 C112 N121 C121	177.1 (8)							
C122 C121 N121 C112	51.2 (11)	C123 C121 N121 C112	-71.7 (11)	C124 C121 N121 C112	167.3 (9)							
N121 C121 C122 O122	-143.1 (10)	N121 C121 C122 O125	39.4 (11)	C123 C121 C122 O122	-20.9 (14)							
C123 C121 C122 O125	161.6 (8)	C124 C121 C122 O122	101.1 (11)	C124 C121 C122 O125	-76.5 (10)							
<b>Molecule B</b>												
C5 O1 C1 C2	-65.3 (11)	C5 O1 C1 C3	59.2 (11)	C5 O1 C1 C4	176.6 (8)							
C1 O1 C5 O5	3.7 (15)	C1 O1 C5 N11	-176.9 (8)	C125 O125 C122 O122	9.3 (19)							
C125 O125 C122 C121	179.6 (11)	O1 C5 N11 C11	-178.5 (8)	O5 C5 N11 C11	0.9 (15)							
C12 C11 N11 C5	-58.2 (11)	C13 C11 N11 C5	177.3 (8)	N11 C11 C12 O12	151.5 (8)							
N11 C11 C12 N21	-25.4 (11)	C13 C11 C12 O12	-85.0 (9)	C13 C11 C12 N21	98.1 (9)							
N11 C11 C13 C14	-75.8 (10)	N11 C11 C13 C15	158.4 (10)	C12 C11 C13 C14	159.8 (8)							
C12 C11 C13 C15	33.9 (12)	O12 C12 N21 C21	-2.1 (12)	C11 C12 N21 C21	174.6 (7)							
C22 C21 N21 C12	-52.7 (10)	C23 C21 N21 C12	178.4 (8)	N21 C21 C22 O22	146.5 (8)							
N21 C21 C22 N31	-36.4 (12)	C23 C21 C22 O22	-85.3 (11)	C23 C21 C22 N31	91.9 (11)							
N21 C21 C23 C24	-166.1 (8)	N21 C21 C23 C25	70.9 (11)	C22 C21 C23 C24	65.4 (10)							
C22 C21 C23 C25	-57.7 (11)	O22 C22 N31 C31	-1.0 (14)	C21 C22 N31 C31	-178.1 (8)							
C32 C31 N31 C22	-56.9 (10)	C33 C31 N31 C22	-173.9 (8)	C34 C31 N31 C22	66.4 (11)							
N31 C31 C32 O32	142.1 (8)	N31 C31 C32 N41	-43.9 (10)	C33 C31 C32 O32	-102.4 (9)							
C33 C31 C32 N41	71.6 (9)	C34 C31 C32 O32	19.7 (12)	C34 C31 C32 N41	-166.3 (8)							
O32 C32 N41 C41	-7.5 (13)	C31 C32 N41 C41	178.6 (7)	C42 C41 N41 C32	-66.7 (10)							
C43 C41 N41 C32	169.3 (8)	N41 C41 C42 O42	132.2 (8)	N41 C41 C42 N51	-51.2 (10)							
C43 C41 C42 O42	-103.0 (9)	C43 C41 C42 N51	73.6 (10)	N41 C41 C43 C44	168.1 (7)							
N41 C41 C43 C45	-67.0 (9)	C42 C41 C43 C44	43.5 (10)	C42 C41 C43 C45	168.3 (7)							

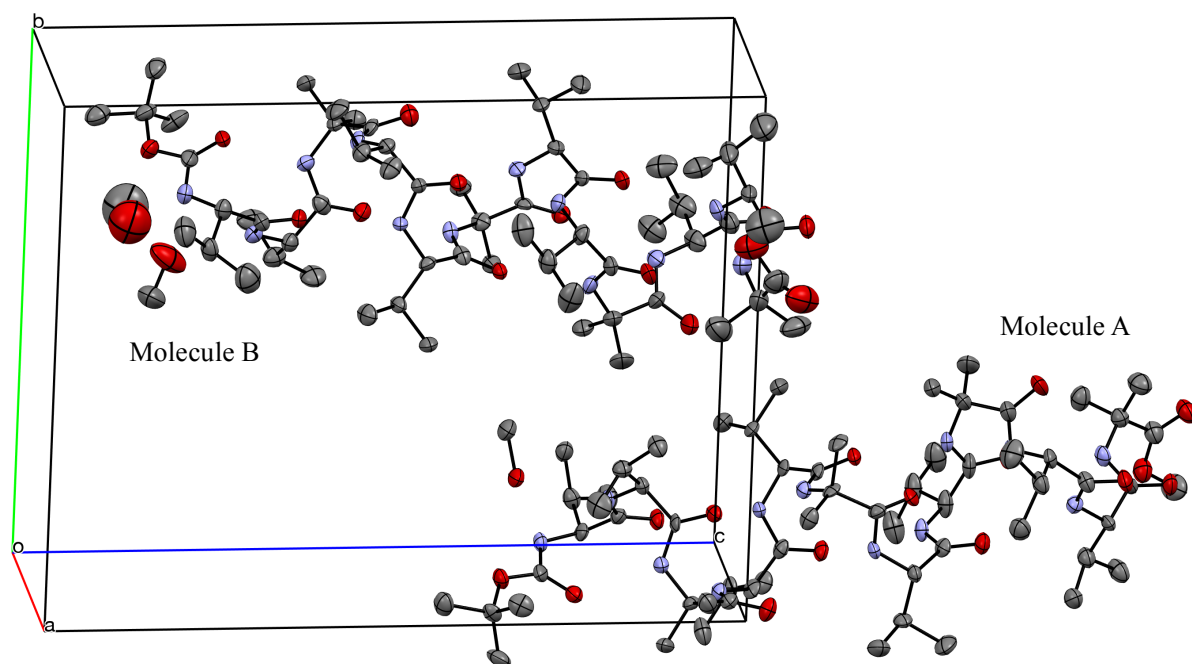
O42	C42	N51	C51	0.3(13)	C41	C42	N51	C51	-176.4(7)	C52	C51	N51	C42	-60.1(10)
C53	C51	N51	C42	176.7(7)	N51	C51	C52	O52	142.5(8)	N51	C51	C52	N61	-39.1(10)
C53	C51	C52	O52	-94.3(9)	C53	C51	C52	N61	84.1(9)	N51	C51	C53	C54	175.7(7)
N51	C51	C53	C55	-63.6(9)	C52	C51	C53	C54	53.4(9)	C52	C51	C53	C55	174.1(7)
O52	C52	N61	C61	-2.9(12)	C51	C52	N61	C61	178.7(7)	C62	C61	N61	C52	-47.5(10)
C63	C61	N61	C52	72.2(10)	C64	C61	N61	C52	-167.6(7)	N61	C61	C62	O62	134.0(9)
N61	C61	C62	N71	-50.7(9)	C63	C61	C62	O62	13.8(12)	C63	C61	C62	N71	-171.0(7)
C64	C61	C62	O62	-105.3(10)	C64	C61	C62	N71	69.9(9)	O62	C62	N71	C71	-2.0(12)
C61	C62	N71	C71	-177.6(7)	C72	C71	N71	C62	-66.0(10)	C73	C71	N71	C62	168.5(7)
N71	C71	C72	O72	135.5(9)	N71	C71	C72	N81	-46.1(10)	C73	C71	C72	O72	-100.7(10)
C73	C71	C72	N81	77.7(9)	N71	C71	C73	C74	175.6(8)	N71	C71	C73	C75	-60.7(9)
C72	C71	C73	C74	50.0(10)	C72	C71	C73	C75	173.7(7)	O72	C72	N81	C81	-4.0(13)
C71	C72	N81	C81	177.6(7)	C82	C81	N81	C72	-52.8(10)	C83	C81	N81	C72	-175.9(8)
N81	C81	C82	O82	133.4(9)	N81	C81	C82	N91	-47.9(10)	C83	C81	C82	O82	-103.8(10)
C83	C81	C82	N91	74.9(10)	N81	C81	C83	C84	-63.6(10)	N81	C81	C83	C85	174.8(9)
C82	C81	C83	C84	172.2(8)	C82	C81	C83	C85	50.6(11)	O82	C82	N91	C91	3.7(13)
C81	C82	N91	C91	-174.9(7)	C92	C91	N91	C82	-57.0(11)	C93	C91	N91	C82	-172.5(8)
C94	C91	N91	C82	64.3(10)	N91	C91	C92	O92	138.8(10)	N91	C91	C92	N101	-41.9(12)
C93	C91	C92	O92	-104.3(11)	C93	C91	C92	N101	74.9(11)	C94	C91	C92	O92	16.4(14)
C94	C91	C92	N101	-164.3(10)	O92	C92	N101	C101	6.6(16)	C91	C92	N101	C101	-172.6(9)
C102	C101	N101	C92	-85.3(11)	C103	C101	N101	C92	147.6(9)	N101	C101	C102	O102	156.5(9)
N101	C101	C102	N111	-22.8(13)	C103	C101	C102	O102	-76.5(12)	C103	C101	C102	N111	104.3(11)
N101	C101	C103	C104	64.7(12)	N101	C101	C103	C105	-59.8(11)	C102	C101	C103	C104	-62.5(13)
C102	C101	C103	C105	173.0(9)	O102	C102	N111	C111	-0.8(15)	C101	C102	N111	C111	178.4(9)
C112	C111	N111	C102	-90.7(11)	C113	C111	N111	C102	139.8(10)	N111	C111	C112	O112	146.8(9)
N111	C111	C112	N121	-33.4(13)	C113	C111	C112	O112	-85.5(12)	C113	C111	C112	N121	94.3(11)
N111	C111	C113	C114	74.7(12)	N111	C111	C113	C115	-160.2(11)	C112	C111	C113	C114	-54.6(12)
C112	C111	C113	C115	70.5(13)	O112	C112	N121	C121	-1.1(16)	C111	C112	N121	C121	179.1(10)
C122	C121	N121	C112	57.3(13)	C123	C121	N121	C112	171.1(11)	C124	C121	N121	C112	-63.1(14)
N121	C121	C122	O122	-156.9(13)	N121	C121	C122	O125	32.8(13)	C123	C121	C122	O122	88.8(15)
C123	C121	C122	O125	-81.5(11)	C124	C121	C122	O122	-30.7(17)	C124	C121	C122	O125	159.0(10)

\*PLATON: Spek, A. L. (2009). Acta Cryst. D65, 148-155.

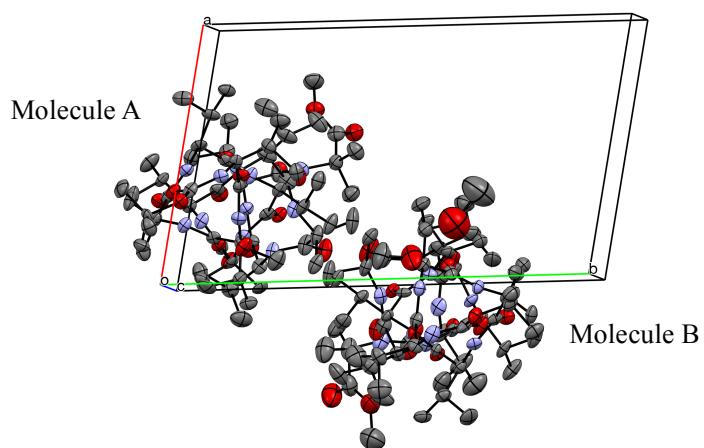
**Table S5.** Hydrogen bond geometries\*.

Nr	Typ	Res	Donor	--- H....Acceptor	[ ARU ]	D - H	H...A	D...A	D - H...A
<b>Molecule A</b>									
1	3	O1M_1	--H1M_1	..O102_1	[ 1554.01]	0.91	2.03	2.819(9)	145
2	4	O2M_1	--H2M_1	..O3M_1	[ 1555.05]	0.85	1.76	2.53(2)	151
3	5	O3M_1	--H3M_1	..O102_2	[ 1554.02]	0.85	1.77	2.53(2)	147
4	1	N11_1	--H11_1	..O112_1	[ 1554.01]	0.88	2.00	2.859(9)	164
5	1	N21_1	--H21_1	..O1M_1	[ 1555.03]	0.88	2.12	2.981(9)	167
7	Intra	1	N31_1	--H31_1	..O5_1 [ ]	0.88	2.17	3.014(9)	161
9	Intra	1	N41_1	--H41_1	..O12_1 [ ]	0.88	2.32	2.944(9)	128
11	Intra	1	N51_1	--H51_1	..O12_1 [ ]	0.88	2.23	3.099(9)	172
12	Intra	1	N61_1	--H61_1	..O22_1 [ ]	0.88	2.00	2.856(9)	162
14	Intra	1	N81_1	--H81_1	..O42_1 [ ]	0.88	2.25	3.122(9)	173
15	Intra	1	N91_1	--H91_1	..O52_1 [ ]	0.88	2.00	2.850(9)	162
17	Intra	1	N101_1	--H101_1	..N91_1 [ ]	0.88	2.51	2.799(10)	100
18	Intra	1	N111_1	--H111_1	..O72_1 [ ]	0.88	2.22	3.033(9)	154
20	Intra	1	N121_1	--H121_1	..O82_1 [ ]	0.88	1.99	2.862(9)	170
<b>Molecule B</b>									
21	2	N11_2	--H11_2	..O112_2	[ 1554.02]	0.88	2.02	2.869(10)	161
22	2	N21_2	--H21_2	..O2M_1	[ 1555.04]	0.88	2.04	2.905(13)	167
24	Intra	2	N31_2	--H31_2	..O5_2 [ ]	0.88	2.11	2.912(9)	151
26	Intra	2	N41_2	--H41_2	..O12_2 [ ]	0.88	2.38	2.954(9)	123
28	Intra	2	N51_2	--H51_2	..O12_2 [ ]	0.88	2.19	3.059(9)	169
29	Intra	2	N61_2	--H61_2	..O22_2 [ ]	0.88	1.97	2.822(9)	163
31	Intra	2	N71_2	--H71_2	..O42_2 [ ]	0.88	2.51	3.045(10)	120
32	Intra	2	N81_2	--H81_2	..O42_2 [ ]	0.88	2.19	3.061(9)	172
33	Intra	2	N91_2	--H91_2	..O52_2 [ ]	0.88	1.95	2.813(9)	167
35	Intra	2	N101_2	--H101_2	..O62_2 [ ]	0.88	2.45	3.239(11)	149
37	Intra	2	N111_2	--H111_2	..O72_2 [ ]	0.88	2.23	3.026(9)	150
39	Intra	2	N121_2	--H121_2	..O82_2 [ ]	0.88	2.03	2.884(11)	165
Translation of ARU-Code to CIF and Equivalent Position Code									
=====									
[ 1554.] = [ 1_554] = x,y,-1+z									
[ 1465.] = [ 1_465] = -1+x,1+y,z									
=====									

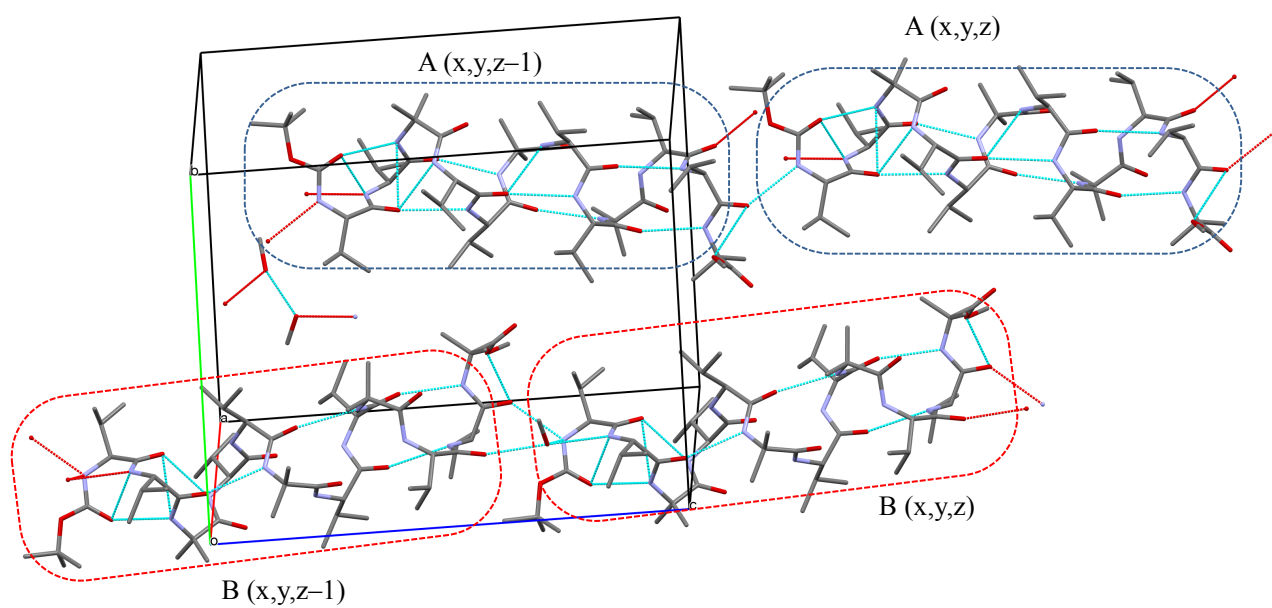
\*PLATON: Spek, A. L. (2009). Acta Cryst. D65, 148-155.



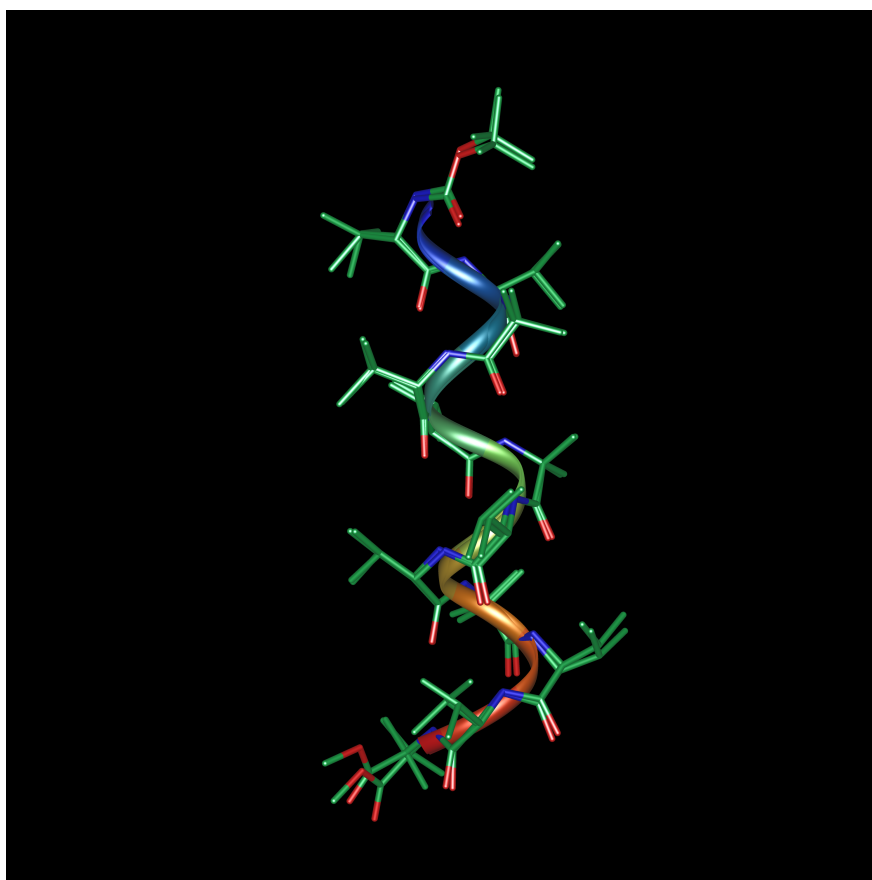
**Figure S1.** Molecular structures (ORTEP, helix side).



**Figure S2.** Molecular structures (ORTEP, helix top).



**Figure S3.** Molecular packing (head-to-tail).



**Figure S4.** Molecular fitting (RMS=0.138 Å).

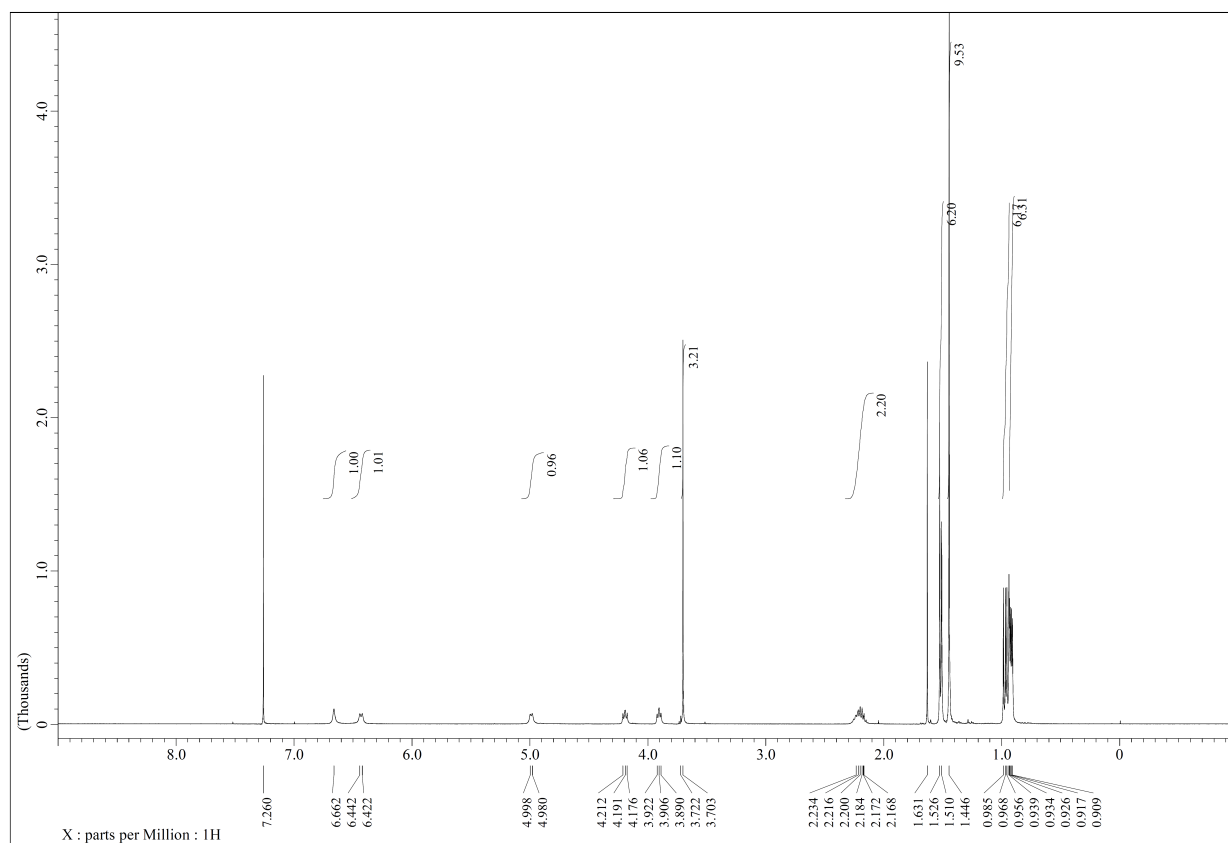


Figure S5.  $^1\text{H}$  NMR of tripeptide 1

2016-1215-V\_LLA\_  
Sample Name:  
2016-1215-V\_LLA\_  
Data Collected on:  
Agilent-NMR400-mercury400  
Archive directory:  
/home/vnmr1/vnmrays/data/AUTO  
Sample directory:  
2016-1215-V\_LLA\_20161215\_02  
Fidfile: CARBON\_01

Pulse Sequence: CARBON (s2pul)  
Solvent: cdcl3  
Data collected on: Dec 15 2016

Operator: vnmr1

Relax. delay 1.699 sec  
Pulse 45.0 degrees  
Acq. time 1.301 sec  
Width 25198.9 Hz  
20000 repetitions  
OBSERVE C13, 100.6949420 MHz  
DECOUPLE H1, 400.4588523 MHz  
Power 35 dB  
continuously on  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 1.0 Hz  
FT size 65536  
Total time 16 hr, 42 min

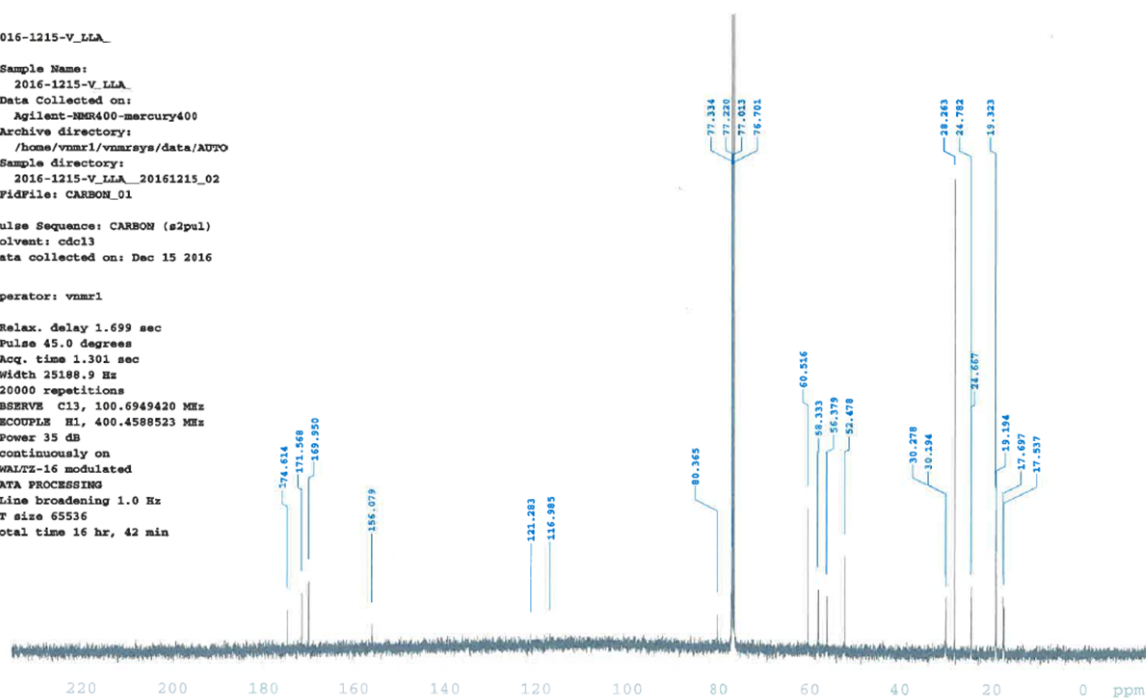


Figure S6. <sup>13</sup>C NMR of tripeptide 1

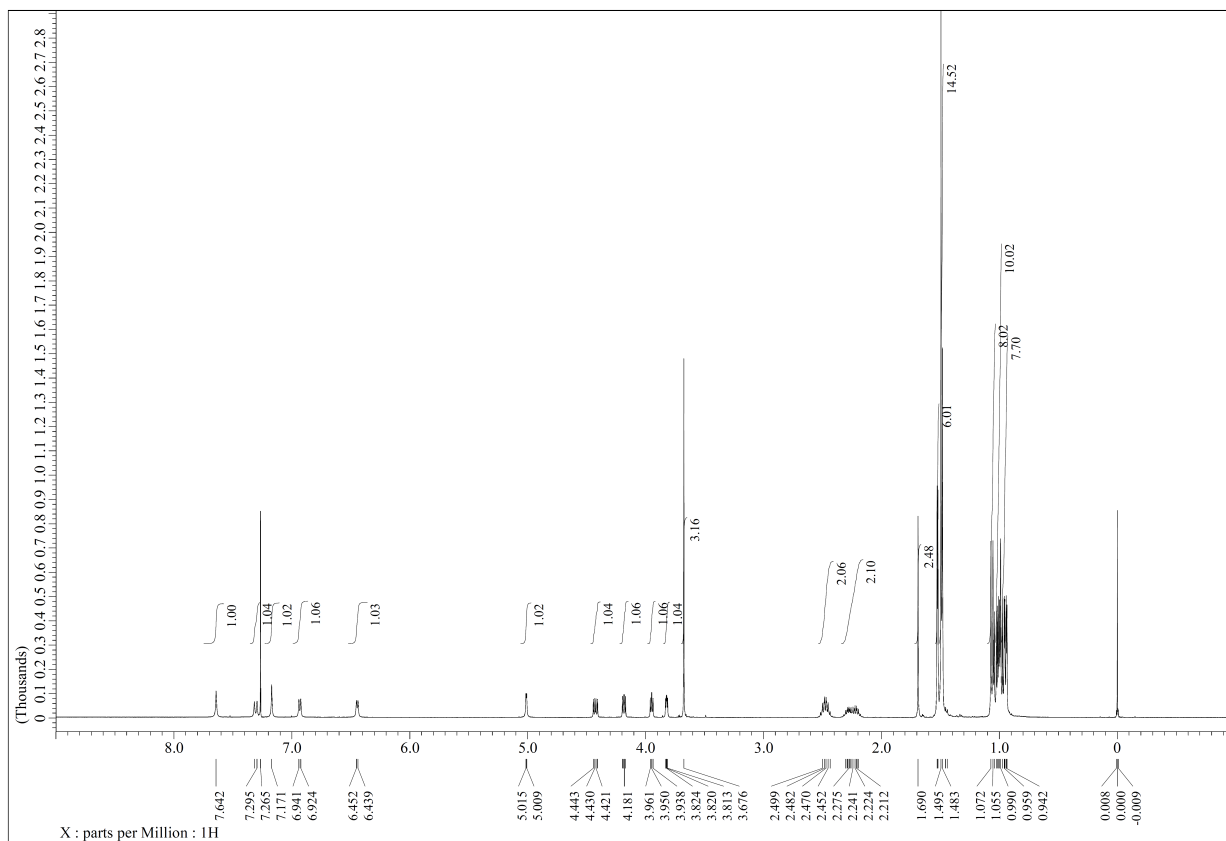


Figure S7.  $^1\text{H}$  NMR of hexapeptide 2



2016-1222-V\_LLA\_2

Sample Name:  
2016-1222-V\_LLA\_2  
Data Collected on:  
Agilent-NMR400-mercury400  
Archive directory:  
/home/vnmr1/vnmrsys/data/ADTO  
Sample directory:  
2016-1222-V\_LLA\_2\_20161222\_01  
FidFile: CARBON\_01

Pulse Sequence: CARBON (s2pul)  
Solvent: cdcl3  
Data collected on: Dec 22 2016

Operator: vnmr1

Relax. delay 1.699 sec  
Pulse 45.0 degrees  
Acq. time 1.301 sec  
Width 25188.9 Hz  
25000 repetitions  
OBSERVE C13, 100.6949406 MHz  
DECOUPLE H1, 400.4588523 MHz  
Power 35 dB  
continuously on  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 1.0 Hz  
FT size 65536  
Total time 20 hr, 53 min

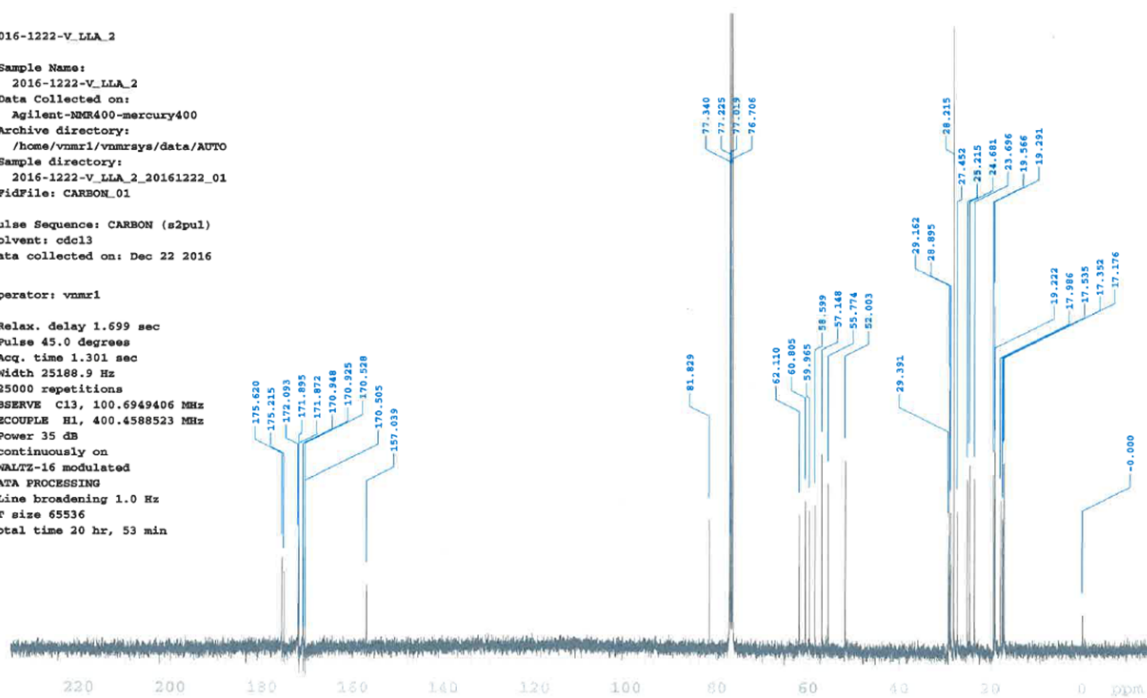


Figure S8. <sup>13</sup>C NMR of hexapeptide 2

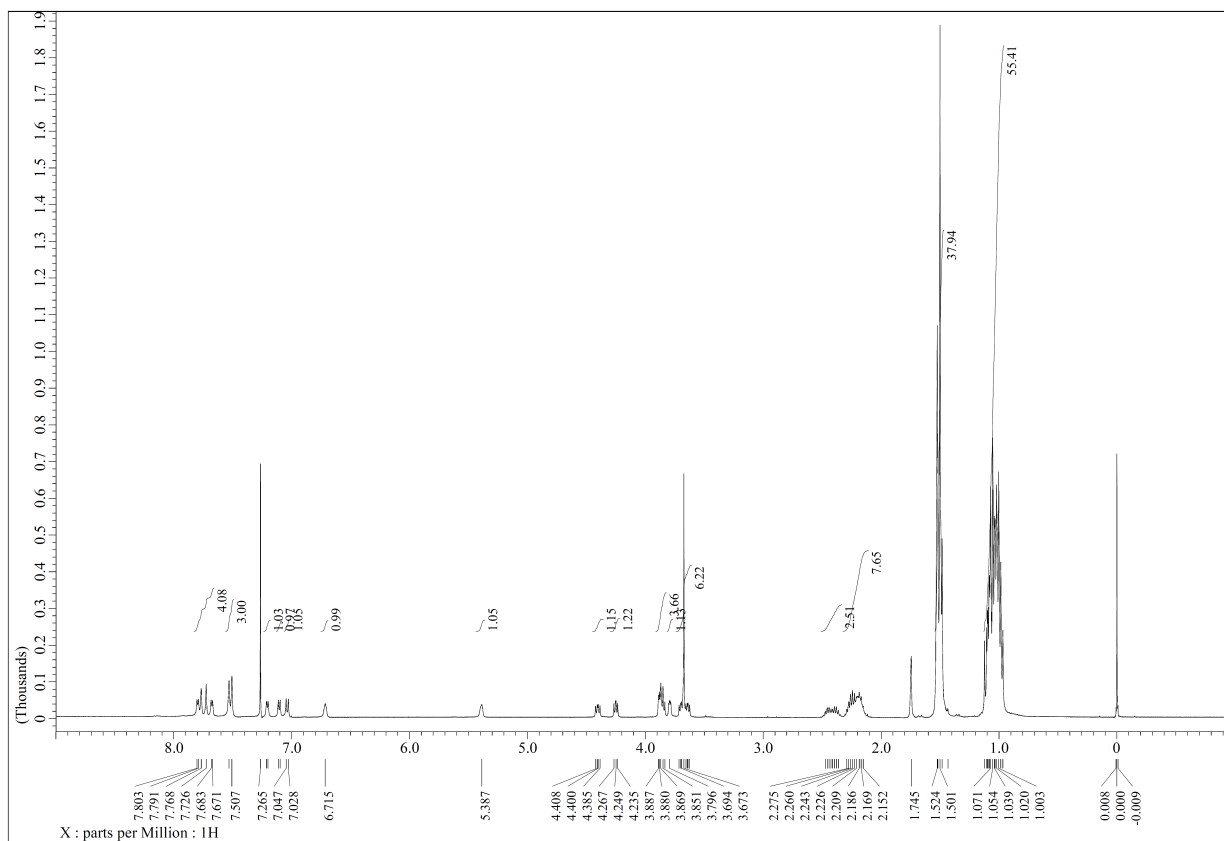


Figure S9.  $^1\text{H}$  NMR of dodecapeptide 3

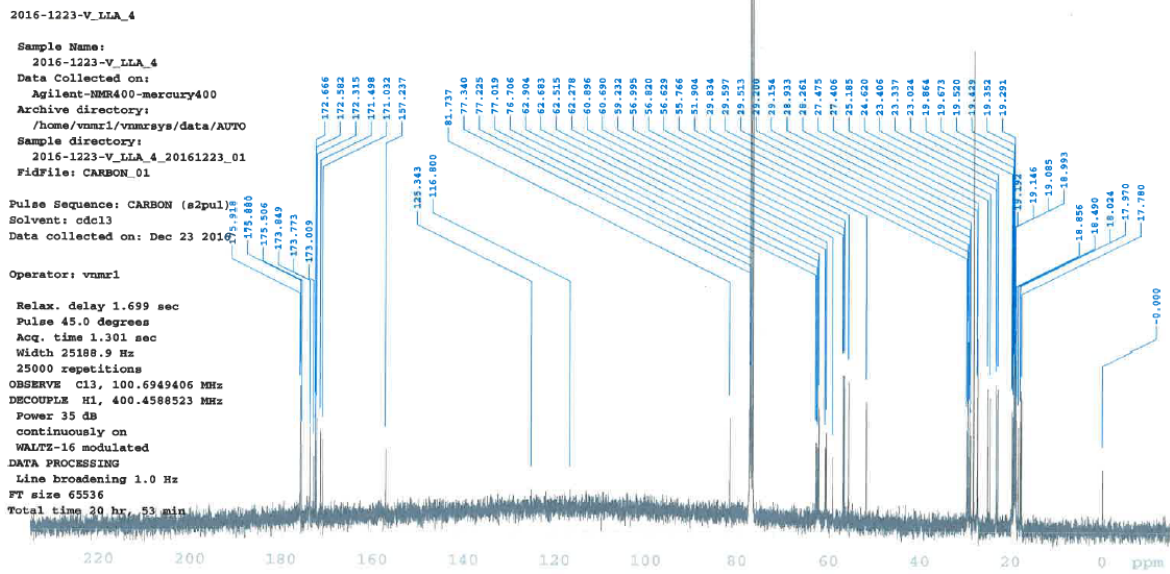


Figure S10.  $^{13}\text{C}$  NMR of dodecapeptide 3