

## Electronic Supplementary Information (ESI)

# Axially Phenoxyated Aluminum Phthalocyanines and Their Application in Organic Photovoltaic Cells.

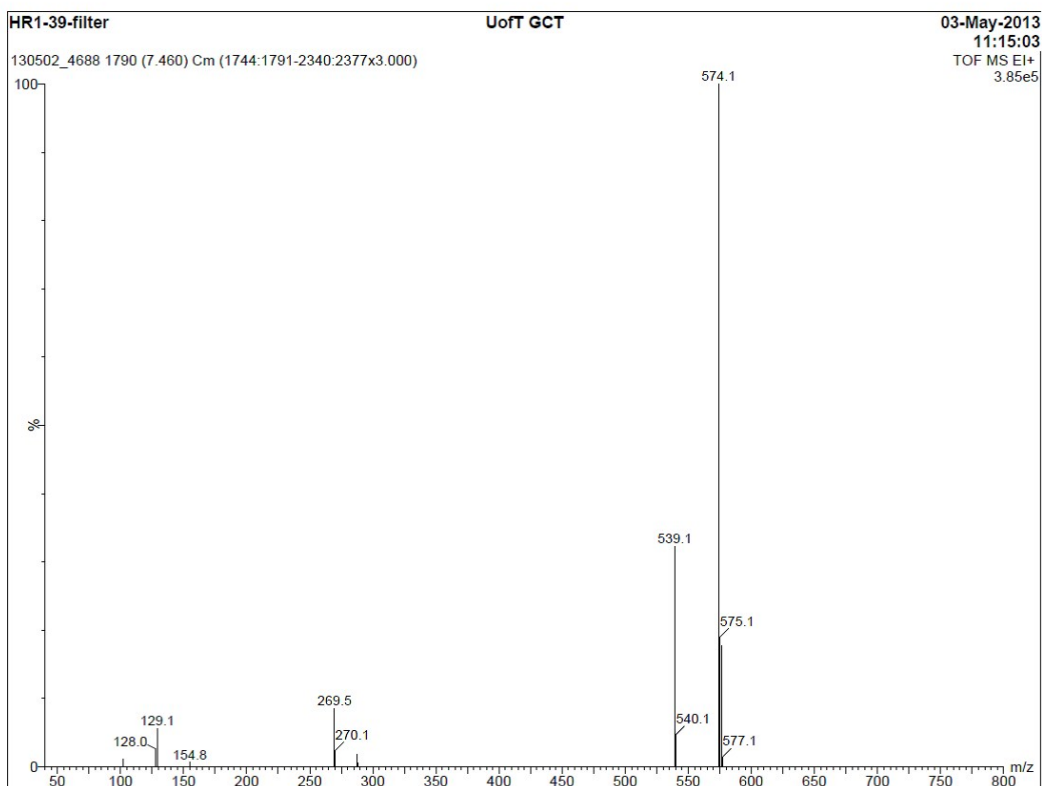
*Hasan Raboui<sup>a</sup>, Mohammad Al-Amar<sup>a</sup>, Ahmed I. Abdelrahman<sup>a</sup> and Timothy P. Bender<sup>a,b,c,\*</sup>*

<sup>a</sup> Department of Chemical Engineering and Applied Chemistry, University of Toronto, 200  
College St., Toronto, Ontario, Canada M5S 3E5

<sup>b</sup> Department of Chemistry, University of Toronto, 80 St. George St., Toronto, Ontario, Canada,  
M5S 3H6

<sup>c</sup> Department of Materials Science and Engineering, University of Toronto, 184 College St.,  
Toronto, Ontario, Canada M5S 3E4

\* to whom correspondences should be addressed. Email: [tim.bender@utoronto.ca](mailto:tim.bender@utoronto.ca)



## Elemental Composition Report

Page 1

### Single Mass Analysis

Tolerance = 10.0 PPM / DBE: min = -1.5, max = 50.0

Selected filters: None

Monoisotopic Mass, Odd and Even Electron Ions

254 formula(e) evaluated with 4 results within limits (all results (up to 1000) for each mass)

Elements Used:

C: 0-500 H: 0-1000 N: 0-8 Al: 0-1 Cl: 0-1

HR1-39-filter

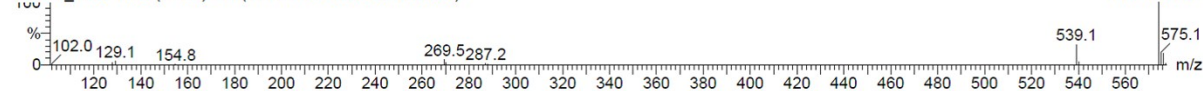
UoT GCT

03-May-2013

11:15:03

TOF MS EI+

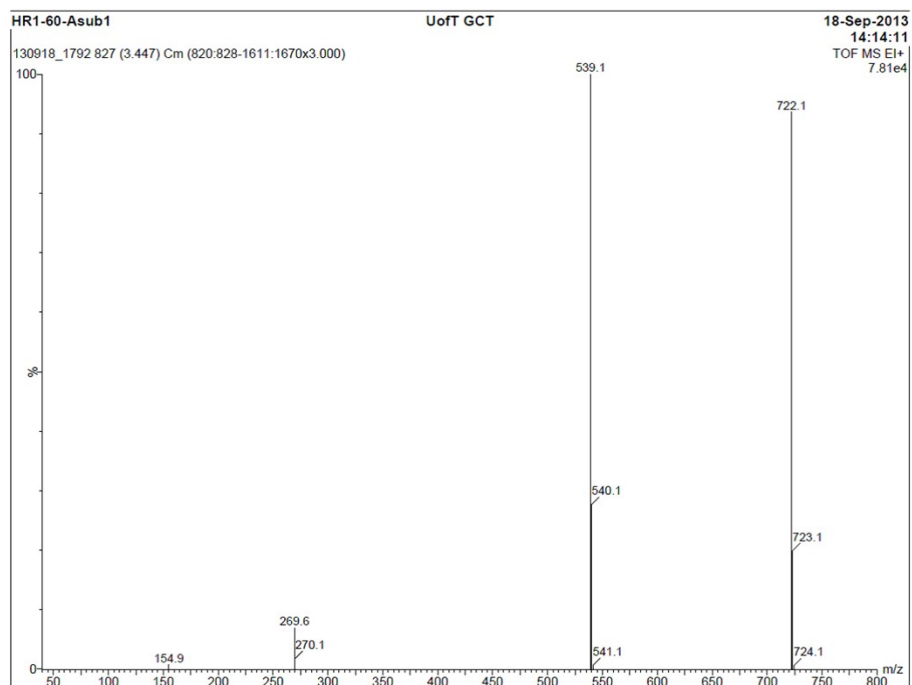
130502\_4688 1790 (7.460) Cm (1744:1791-2340:2377x3.000)



Minimum: -1.5  
 Maximum: 50.0

| Mass     | Calc. Mass | mDa  | PPM  | DBE  | i-FIT   | Formula          |
|----------|------------|------|------|------|---------|------------------|
| 574.1006 | 574.1002   | 0.4  | 0.7  | 29.0 | 33854.9 | C32 H16 N8 Al Cl |
|          | 574.0985   | 2.1  | 3.7  | 34.0 | 43184.8 | C39 H15 N4 Cl    |
|          | 574.0967   | 3.9  | 6.8  | 39.0 | 48067.6 | C40 H10 N6       |
|          | 574.1051   | -4.5 | -7.8 | 37.0 | 49092.1 | C42 H15 N2 Al    |

**Figure S1.** Low resolution (top) and high-resolution (bottom) mass spectrum (TOF-EI) of Cl-AlPc.



## Elemental Composition Report

Page 1

## Single Mass Analysis

Tolerance = 5.0 PPM / DBE: min = -1.5, max = 50.0

Selected filters: None

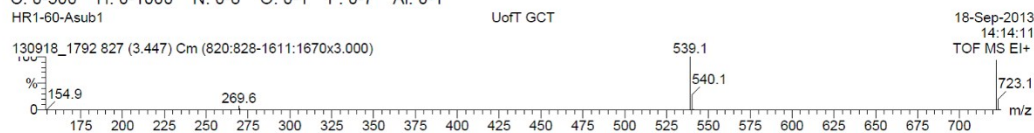
**Monoisotopic Mass, Odd and Even Electron Ions**

2291 formula(e) evaluated with 22 results within limits (all results (up to 1000) for each mass)

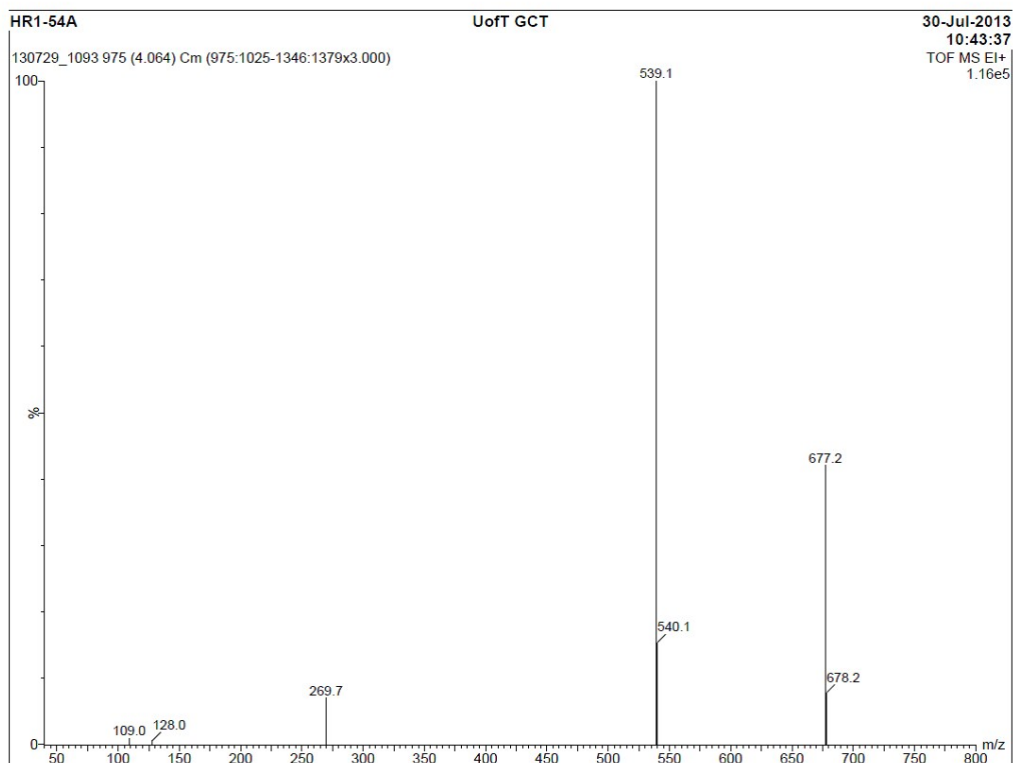
Elements Used:

C: 0-500 H: 0-1000 N: 0-8 O: 0-1 F: 0-7 Al: 0-1

HR1-60-Asub1

[illegible]

**Figure S2.** Low resolution (top) and high-resolution (bottom) mass spectrum (TOF-EI) of F<sub>5</sub>PhO-AlPc.



## Elemental Composition Report

Page 1

### Single Mass Analysis

Tolerance = 5.0 PPM / DBE: min = -1.5, max = 50.0

Selected filters: None

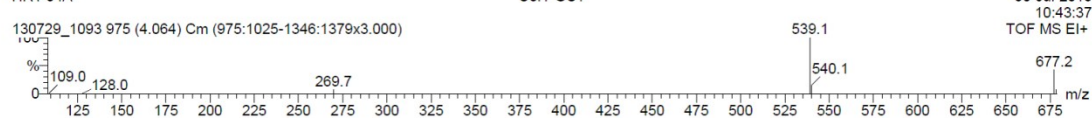
Monoisotopic Mass, Odd and Even Electron Ions

1056 formula(e) evaluated with 11 results within limits (all results (up to 1000) for each mass)

Elements Used:

C: 0-500 H: 0-1000 N: 0-10 O: 0-5 Al: 0-1

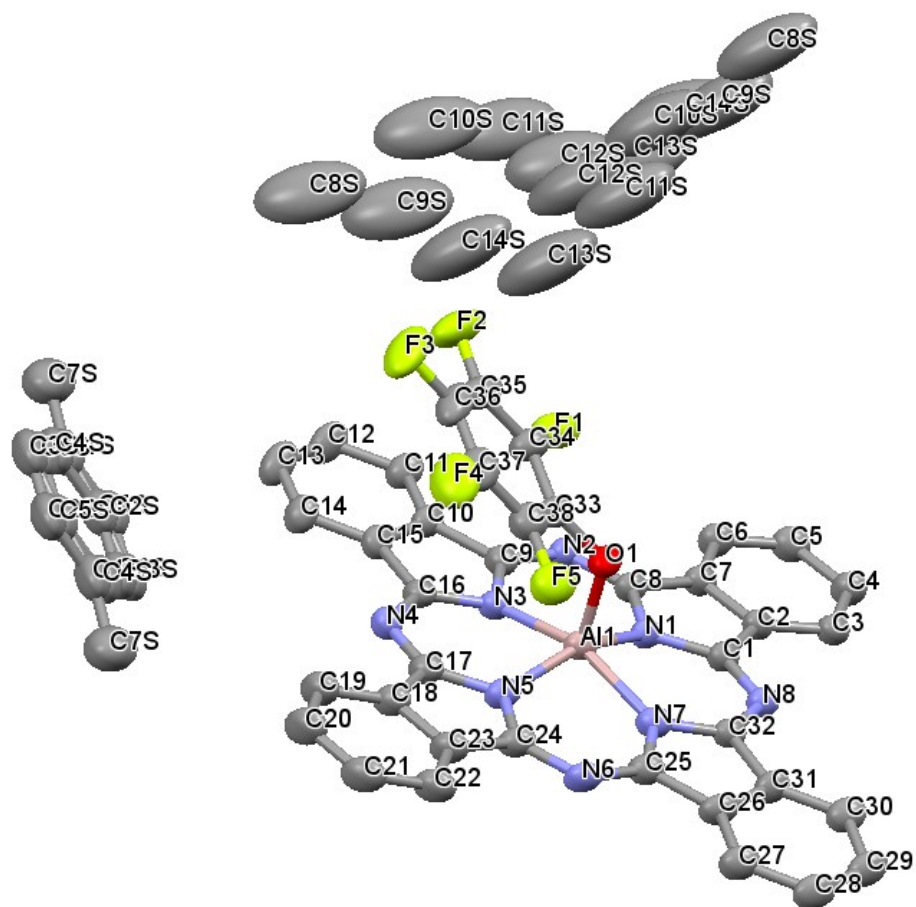
HR1-54A



Minimum: -1.5  
Maximum: 5.0 5.0 50.0

| Mass     | Calc. Mass | mDa  | PPM  | DBE  | i-FIT     | Formula          |
|----------|------------|------|------|------|-----------|------------------|
| 677.1503 | 677.1505   | -0.2 | -0.3 | 34.0 | 2801772.5 | C38 H20 N9 O3 Al |
|          | 677.1501   | 0.2  | 0.3  | 38.5 | 2801810.5 | C47 H21 N2 O4    |
|          | 677.1515   | -1.2 | -1.8 | 43.5 | 2801812.8 | C48 H17 N6       |
|          | 677.1488   | 1.5  | 2.2  | 39.0 | 2801806.0 | C45 H19 N5 O3    |
|          | 677.1518   | -1.5 | -2.2 | 33.5 | 2801783.0 | C40 H22 N6 O4 Al |
|          | 677.1486   | 1.7  | 2.5  | 41.5 | 2801819.3 | C51 H22 O Al     |
|          | 677.1528   | -2.5 | -3.7 | 43.0 | 2801819.0 | C50 H19 N3 O     |
|          | 677.1531   | -2.8 | -4.1 | 33.0 | 2801793.5 | C42 H24 N3 O5 Al |
|          | 677.1531   | -2.8 | -4.1 | 38.5 | 2801786.5 | C41 H18 N10 Al   |
|          | 677.1474   | 2.9  | 4.3  | 39.5 | 2801801.5 | C43 H17 N8 O2    |
|          | 677.1473   | 3.0  | 4.4  | 42.0 | 2801817.0 | C49 H20 N3 Al    |

**Figure S3.** Low resolution (top) and high-resolution (bottom) mass spectrum (TOF-EI) of  $\text{NO}_2\text{PhO-AlPc}$ .



**Figure S4.** Molecular structure of F<sub>5</sub>PhO-AlPc including toluene and heptane solvate molecules. Elipsoids shown at 50% probability level. Carbon – grey; nitrogben – blue; aluminum – pink; oxygen – red; fluorine – yellow. Hydrogen atoms are omitted for clarity. CCDC deposition number 1061523.

**Table S1.** Crystal data and structure refinement for F<sub>5</sub>PhO-AlPc.

|                                   |                                                                    |                 |
|-----------------------------------|--------------------------------------------------------------------|-----------------|
| CCDC Deposition Number            | 1061523                                                            |                 |
| Identification code               | F <sub>5</sub> PhO-AlPc                                            |                 |
| Empirical formula                 | C <sub>45</sub> H <sub>28</sub> Al F <sub>5</sub> N <sub>8</sub> O |                 |
| Formula weight                    | 818.73                                                             |                 |
| Temperature                       | 147(2) K                                                           |                 |
| Wavelength                        | 1.54178 Å                                                          |                 |
| Crystal system                    | Monoclinic                                                         |                 |
| Space group                       | P 2/n                                                              |                 |
| Unit cell dimensions              | a = 10.3131(6) Å                                                   | a = 90°.        |
|                                   | b = 14.4067(7) Å                                                   | b = 99.572(4)°. |
|                                   | c = 24.7771(11) Å                                                  | g = 90°.        |
| Volume                            | 3630.1(3) Å <sup>3</sup>                                           |                 |
| Z                                 | 4                                                                  |                 |
| Density (calculated)              | 1.498 Mg/m <sup>3</sup>                                            |                 |
| Absorption coefficient            | 1.153 mm <sup>-1</sup>                                             |                 |
| F(000)                            | 1680                                                               |                 |
| Crystal size                      | 0.120 x 0.120 x 0.020 mm <sup>3</sup>                              |                 |
| Theta range for data collection   | 3.067 to 67.249°.                                                  |                 |
| Index ranges                      | -12 ≤ h ≤ 11, -17 ≤ k ≤ 17, -29 ≤ l ≤ 29                           |                 |
| Reflections collected             | 45324                                                              |                 |
| Independent reflections           | 6430 [R(int) = 0.1586]                                             |                 |
| Completeness to theta = 67.679°   | 97.7 %                                                             |                 |
| Absorption correction             | Semi-empirical from equivalents                                    |                 |
| Max. and min. transmission        | 0.7529 and 0.6166                                                  |                 |
| Refinement method                 | Full-matrix least-squares on F <sup>2</sup>                        |                 |
| Data / restraints / parameters    | 6430 / 14 / 526                                                    |                 |
| Goodness-of-fit on F <sup>2</sup> | 1.038                                                              |                 |
| Final R indices [I > 2σ(I)]       | R1 = 0.0878, wR2 = 0.2248                                          |                 |
| R indices (all data)              | R1 = 0.1402, wR2 = 0.2660                                          |                 |
| Extinction coefficient            | n/a                                                                |                 |
| Largest diff. peak and hole       | 0.898 and -0.613 e.Å <sup>-3</sup>                                 |                 |

**Table S2.** Atomic coordinates (  $\times 10^4$ ) and equivalent isotropic displacement parameters ( $\text{\AA}^2 \times 10^3$ )

for  $\text{F}_5\text{PhO-AlPc}$ .  $U(\text{eq})$  is defined as one third of the trace of the orthogonalized  $U_{ij}$  tensor.

|       | x       | y       | z       | $U(\text{eq})$ |
|-------|---------|---------|---------|----------------|
| Al(1) | 6704(2) | 4030(1) | 5261(1) | 32(1)          |
| F(1)  | 6945(4) | 2304(2) | 4162(1) | 57(1)          |
| F(2)  | 6253(4) | 493(3)  | 4057(2) | 82(1)          |
| F(3)  | 6316(4) | -594(3) | 4949(2) | 87(1)          |
| F(4)  | 7094(4) | 142(3)  | 5965(2) | 79(1)          |
| F(5)  | 7799(4) | 1940(2) | 6083(1) | 55(1)          |
| O(1)  | 7723(3) | 3071(2) | 5181(1) | 36(1)          |
| N(1)  | 7163(4) | 4903(3) | 4722(1) | 30(1)          |
| N(2)  | 5683(4) | 4420(3) | 3902(1) | 32(1)          |
| N(3)  | 5155(4) | 3721(3) | 4732(2) | 33(1)          |
| N(4)  | 4005(4) | 2710(3) | 5282(2) | 34(1)          |
| N(5)  | 5775(4) | 3568(3) | 5831(1) | 34(1)          |
| N(6)  | 7209(5) | 4083(3) | 6653(2) | 37(1)          |
| N(7)  | 7789(4) | 4756(3) | 5822(2) | 35(1)          |
| N(8)  | 8963(4) | 5740(3) | 5273(1) | 32(1)          |
| C(1)  | 8219(5) | 5515(3) | 4802(2) | 30(1)          |
| C(2)  | 8421(5) | 5905(3) | 4292(2) | 32(1)          |
| C(3)  | 9365(5) | 6523(3) | 4167(2) | 35(1)          |
| C(4)  | 9328(6) | 6736(4) | 3621(2) | 40(1)          |
| C(5)  | 8371(6) | 6351(4) | 3212(2) | 41(1)          |
| C(6)  | 7424(5) | 5749(4) | 3337(2) | 36(1)          |
| C(7)  | 7465(5) | 5526(3) | 3884(2) | 31(1)          |
| C(8)  | 6687(5) | 4905(3) | 4159(2) | 30(1)          |
| C(9)  | 4975(5) | 3866(3) | 4168(2) | 32(1)          |
| C(10) | 3890(5) | 3301(3) | 3890(2) | 32(1)          |
| C(11) | 3349(6) | 3195(4) | 3341(2) | 40(1)          |
| C(12) | 2311(6) | 2563(4) | 3223(2) | 47(1)          |
| C(13) | 1859(6) | 2062(4) | 3638(2) | 49(2)          |

|        |           |           |          |        |
|--------|-----------|-----------|----------|--------|
| C(14)  | 2398(6)   | 2181(4)   | 4182(2)  | 42(1)  |
| C(15)  | 3417(5)   | 2808(4)   | 4297(2)  | 34(1)  |
| C(16)  | 4210(5)   | 3070(3)   | 4812(2)  | 32(1)  |
| C(17)  | 4744(5)   | 2939(3)   | 5752(2)  | 35(1)  |
| C(18)  | 4558(6)   | 2537(4)   | 6265(2)  | 39(1)  |
| C(19)  | 3716(6)   | 1845(4)   | 6392(2)  | 48(2)  |
| C(20)  | 3815(7)   | 1591(4)   | 6938(2)  | 54(2)  |
| C(21)  | 4740(7)   | 2023(4)   | 7348(2)  | 51(2)  |
| C(22)  | 5568(6)   | 2707(4)   | 7223(2)  | 46(1)  |
| C(23)  | 5477(6)   | 2959(4)   | 6672(2)  | 38(1)  |
| C(24)  | 6218(6)   | 3590(3)   | 6394(2)  | 37(1)  |
| C(25)  | 7918(5)   | 4635(3)   | 6389(2)  | 35(1)  |
| C(26)  | 8977(5)   | 5206(4)   | 6665(2)  | 37(1)  |
| C(27)  | 9471(6)   | 5336(4)   | 7223(2)  | 42(1)  |
| C(28)  | 10496(6)  | 5957(4)   | 7348(2)  | 44(1)  |
| C(29)  | 11018(6)  | 6429(4)   | 6943(2)  | 45(1)  |
| C(30)  | 10526(6)  | 6291(4)   | 6386(2)  | 41(1)  |
| C(31)  | 9507(5)   | 5680(3)   | 6263(2)  | 35(1)  |
| C(32)  | 8735(5)   | 5394(3)   | 5742(2)  | 30(1)  |
| C(33)  | 7351(5)   | 2182(3)   | 5128(2)  | 38(1)  |
| C(34)  | 6959(6)   | 1776(4)   | 4615(2)  | 45(1)  |
| C(35)  | 6610(6)   | 862(4)    | 4560(3)  | 57(2)  |
| C(36)  | 6646(6)   | 312(4)    | 5009(3)  | 59(2)  |
| C(37)  | 7035(7)   | 681(4)    | 5519(3)  | 56(2)  |
| C(38)  | 7386(6)   | 1601(4)   | 5573(2)  | 46(1)  |
| C(1S)  | 10380(20) | 10125(9)  | 5627(6)  | 79(4)  |
| C(2S)  | 10110(20) | 9196(9)   | 5504(6)  | 79(4)  |
| C(3S)  | 9760(20)  | 8917(9)   | 4963(6)  | 79(4)  |
| C(4S)  | 9670(20)  | 9567(10)  | 4544(6)  | 79(4)  |
| C(5S)  | 9930(20)  | 10497(10) | 4666(6)  | 79(4)  |
| C(6S)  | 10290(20) | 10776(8)  | 5208(6)  | 79(4)  |
| C(7S)  | 10719(18) | 10438(10) | 6227(6)  | 95(5)  |
| C(8S)  | 8300(20)  | 10009(15) | 7409(10) | 202(7) |
| C(9S)  | 9520(20)  | 9390(14)  | 7451(8)  | 202(7) |
| C(10S) | 10302(18) | 9907(12)  | 7092(8)  | 202(7) |
| C(11S) | 11175(19) | 9278(15)  | 6911(6)  | 202(7) |



|        |           |          |          |        |
|--------|-----------|----------|----------|--------|
| C(12S) | 12292(18) | 9103(14) | 7358(6)  | 202(7) |
| C(13S) | 13150(20) | 8477(12) | 7087(9)  | 202(7) |
| C(14S) | 14440(20) | 8981(17) | 7190(10) | 202(7) |

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**Table S3.** Bond lengths [Å] and angles [°] for F<sub>5</sub>PhO-AlPc.

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|            |          |
|------------|----------|
| Al(1)-O(1) | 1.766(4) |
| Al(1)-N(7) | 1.940(4) |
| Al(1)-N(3) | 1.942(4) |
| Al(1)-N(1) | 1.948(4) |
| Al(1)-N(5) | 1.952(4) |
| F(1)-C(34) | 1.353(6) |
| F(2)-C(35) | 1.348(7) |
| F(3)-C(36) | 1.350(7) |
| F(4)-C(37) | 1.343(7) |
| F(5)-C(38) | 1.355(6) |
| O(1)-C(33) | 1.338(6) |
| N(1)-C(1)  | 1.390(6) |
| N(1)-C(8)  | 1.399(5) |
| N(2)-C(8)  | 1.322(6) |
| N(2)-C(9)  | 1.328(6) |
| N(3)-C(16) | 1.391(6) |
| N(3)-C(9)  | 1.396(6) |
| N(4)-C(17) | 1.321(6) |
| N(4)-C(16) | 1.323(6) |
| N(5)-C(17) | 1.386(7) |
| N(5)-C(24) | 1.393(6) |
| N(6)-C(24) | 1.321(7) |
| N(6)-C(25) | 1.324(6) |
| N(7)-C(32) | 1.379(6) |
| N(7)-C(25) | 1.399(6) |
| N(8)-C(32) | 1.323(6) |
| N(8)-C(1)  | 1.325(6) |
| C(1)-C(2)  | 1.430(6) |
| C(2)-C(3)  | 1.391(7) |
| C(2)-C(7)  | 1.400(6) |
| C(3)-C(4)  | 1.381(7) |
| C(3)-H(3A) | 0.9500   |
| C(4)-C(5)  | 1.406(7) |
| C(4)-H(4A) | 0.9500   |

|              |          |
|--------------|----------|
| C(5)-C(6)    | 1.378(7) |
| C(5)-H(5A)   | 0.9500   |
| C(6)-C(7)    | 1.388(6) |
| C(6)-H(6A)   | 0.9500   |
| C(7)-C(8)    | 1.445(7) |
| C(9)-C(10)   | 1.460(7) |
| C(10)-C(15)  | 1.387(7) |
| C(10)-C(11)  | 1.390(7) |
| C(11)-C(12)  | 1.399(8) |
| C(11)-H(11A) | 0.9500   |
| C(12)-C(13)  | 1.397(8) |
| C(12)-H(12A) | 0.9500   |
| C(13)-C(14)  | 1.380(7) |
| C(13)-H(13A) | 0.9500   |
| C(14)-C(15)  | 1.379(7) |
| C(14)-H(14A) | 0.9500   |
| C(15)-C(16)  | 1.448(7) |
| C(17)-C(18)  | 1.439(7) |
| C(18)-C(19)  | 1.392(8) |
| C(18)-C(23)  | 1.403(7) |
| C(19)-C(20)  | 1.389(7) |
| C(19)-H(19A) | 0.9500   |
| C(20)-C(21)  | 1.416(9) |
| C(20)-H(20A) | 0.9500   |
| C(21)-C(22)  | 1.374(8) |
| C(21)-H(21A) | 0.9500   |
| C(22)-C(23)  | 1.399(7) |
| C(22)-H(22A) | 0.9500   |
| C(23)-C(24)  | 1.436(7) |
| C(25)-C(26)  | 1.444(7) |
| C(26)-C(31)  | 1.390(7) |
| C(26)-C(27)  | 1.405(6) |
| C(27)-C(28)  | 1.380(8) |
| C(27)-H(27A) | 0.9500   |
| C(28)-C(29)  | 1.393(8) |
| C(28)-H(28A) | 0.9500   |

|               |           |
|---------------|-----------|
| C(29)-C(30)   | 1.404(7)  |
| C(29)-H(29A)  | 0.9500    |
| C(30)-C(31)   | 1.366(8)  |
| C(30)-H(30A)  | 0.9500    |
| C(31)-C(32)   | 1.458(6)  |
| C(33)-C(38)   | 1.380(7)  |
| C(33)-C(34)   | 1.395(7)  |
| C(34)-C(35)   | 1.366(8)  |
| C(35)-C(36)   | 1.363(10) |
| C(36)-C(37)   | 1.368(9)  |
| C(37)-C(38)   | 1.375(8)  |
| C(1S)-C(2S)   | 1.3900    |
| C(1S)-C(6S)   | 1.3900    |
| C(1S)-C(7S)   | 1.539(10) |
| C(2S)-C(3S)   | 1.3900    |
| C(2S)-H(2SA)  | 0.9500    |
| C(3S)-C(4S)   | 1.3900    |
| C(3S)-H(3SA)  | 0.9500    |
| C(4S)-C(5S)   | 1.3900    |
| C(4S)-H(4SA)  | 0.9500    |
| C(5S)-C(6S)   | 1.3900    |
| C(5S)-H(5SA)  | 0.9500    |
| C(6S)-H(6SA)  | 0.9500    |
| C(7S)-H(7SA)  | 0.9800    |
| C(7S)-H(7SB)  | 0.9800    |
| C(7S)-H(7SC)  | 0.9800    |
| C(8S)-C(9S)   | 1.528(10) |
| C(8S)-H(8SA)  | 0.9800    |
| C(8S)-H(8SB)  | 0.9800    |
| C(8S)-H(8SC)  | 0.9800    |
| C(9S)-C(10S)  | 1.494(10) |
| C(9S)-H(9SA)  | 0.9900    |
| C(9S)-H(9SB)  | 0.9900    |
| C(10S)-C(11S) | 1.404(9)  |
| C(10S)-H(10A) | 0.9900    |
| C(10S)-H(10B) | 0.9900    |

|               |           |
|---------------|-----------|
| C(11S)-C(12S) | 1.481(10) |
| C(11S)-H(11B) | 0.9900    |
| C(11S)-H(11C) | 0.9900    |
| C(12S)-C(13S) | 1.501(10) |
| C(12S)-H(12B) | 0.9900    |
| C(12S)-H(12C) | 0.9900    |
| C(13S)-C(14S) | 1.497(10) |
| C(13S)-H(13B) | 0.9900    |
| C(13S)-H(13C) | 0.9900    |
| C(14S)-H(14B) | 0.9800    |
| C(14S)-H(14C) | 0.9800    |
| C(14S)-H(14D) | 0.9800    |

|                  |            |
|------------------|------------|
| O(1)-Al(1)-N(7)  | 102.66(18) |
| O(1)-Al(1)-N(3)  | 100.58(17) |
| N(7)-Al(1)-N(3)  | 156.76(19) |
| O(1)-Al(1)-N(1)  | 102.25(18) |
| N(7)-Al(1)-N(1)  | 88.10(17)  |
| N(3)-Al(1)-N(1)  | 87.28(17)  |
| O(1)-Al(1)-N(5)  | 100.76(18) |
| N(7)-Al(1)-N(5)  | 87.59(17)  |
| N(3)-Al(1)-N(5)  | 87.82(18)  |
| N(1)-Al(1)-N(5)  | 156.98(19) |
| C(33)-O(1)-Al(1) | 126.5(3)   |
| C(1)-N(1)-C(8)   | 106.1(4)   |
| C(1)-N(1)-Al(1)  | 125.9(3)   |
| C(8)-N(1)-Al(1)  | 126.8(3)   |
| C(8)-N(2)-C(9)   | 122.0(4)   |
| C(16)-N(3)-C(9)  | 105.4(4)   |
| C(16)-N(3)-Al(1) | 125.1(3)   |
| C(9)-N(3)-Al(1)  | 126.8(3)   |
| C(17)-N(4)-C(16) | 121.5(4)   |
| C(17)-N(5)-C(24) | 105.9(4)   |
| C(17)-N(5)-Al(1) | 125.2(3)   |
| C(24)-N(5)-Al(1) | 126.7(4)   |
| C(24)-N(6)-C(25) | 121.9(4)   |

|                    |          |
|--------------------|----------|
| C(32)-N(7)-C(25)   | 106.0(4) |
| C(32)-N(7)-Al(1)   | 126.4(3) |
| C(25)-N(7)-Al(1)   | 126.9(3) |
| C(32)-N(8)-C(1)    | 121.4(4) |
| N(8)-C(1)-N(1)     | 127.2(4) |
| N(8)-C(1)-C(2)     | 122.3(4) |
| N(1)-C(1)-C(2)     | 110.5(4) |
| C(3)-C(2)-C(7)     | 121.6(4) |
| C(3)-C(2)-C(1)     | 131.1(4) |
| C(7)-C(2)-C(1)     | 107.2(4) |
| C(4)-C(3)-C(2)     | 117.0(5) |
| C(4)-C(3)-H(3A)    | 121.5    |
| C(2)-C(3)-H(3A)    | 121.5    |
| C(3)-C(4)-C(5)     | 121.3(5) |
| C(3)-C(4)-H(4A)    | 119.3    |
| C(5)-C(4)-H(4A)    | 119.3    |
| C(6)-C(5)-C(4)     | 121.7(5) |
| C(6)-C(5)-H(5A)    | 119.2    |
| C(4)-C(5)-H(5A)    | 119.2    |
| C(5)-C(6)-C(7)     | 117.2(5) |
| C(5)-C(6)-H(6A)    | 121.4    |
| C(7)-C(6)-H(6A)    | 121.4    |
| C(6)-C(7)-C(2)     | 121.1(5) |
| C(6)-C(7)-C(8)     | 132.5(4) |
| C(2)-C(7)-C(8)     | 106.3(4) |
| N(2)-C(8)-N(1)     | 126.6(4) |
| N(2)-C(8)-C(7)     | 123.4(4) |
| N(1)-C(8)-C(7)     | 110.0(4) |
| N(2)-C(9)-N(3)     | 126.4(4) |
| N(2)-C(9)-C(10)    | 122.9(4) |
| N(3)-C(9)-C(10)    | 110.7(4) |
| C(15)-C(10)-C(11)  | 121.5(5) |
| C(15)-C(10)-C(9)   | 106.1(4) |
| C(11)-C(10)-C(9)   | 132.4(5) |
| C(10)-C(11)-C(12)  | 116.4(5) |
| C(10)-C(11)-H(11A) | 121.8    |

|                    |          |
|--------------------|----------|
| C(12)-C(11)-H(11A) | 121.8    |
| C(13)-C(12)-C(11)  | 121.4(5) |
| C(13)-C(12)-H(12A) | 119.3    |
| C(11)-C(12)-H(12A) | 119.3    |
| C(14)-C(13)-C(12)  | 121.6(5) |
| C(14)-C(13)-H(13A) | 119.2    |
| C(12)-C(13)-H(13A) | 119.2    |
| C(15)-C(14)-C(13)  | 116.9(5) |
| C(15)-C(14)-H(14A) | 121.5    |
| C(13)-C(14)-H(14A) | 121.5    |
| C(14)-C(15)-C(10)  | 122.2(4) |
| C(14)-C(15)-C(16)  | 130.7(5) |
| C(10)-C(15)-C(16)  | 107.1(4) |
| N(4)-C(16)-N(3)    | 127.5(4) |
| N(4)-C(16)-C(15)   | 121.7(5) |
| N(3)-C(16)-C(15)   | 110.8(4) |
| N(4)-C(17)-N(5)    | 127.2(4) |
| N(4)-C(17)-C(18)   | 122.3(5) |
| N(5)-C(17)-C(18)   | 110.5(4) |
| C(19)-C(18)-C(23)  | 121.3(5) |
| C(19)-C(18)-C(17)  | 131.9(5) |
| C(23)-C(18)-C(17)  | 106.7(5) |
| C(20)-C(19)-C(18)  | 117.5(5) |
| C(20)-C(19)-H(19A) | 121.3    |
| C(18)-C(19)-H(19A) | 121.3    |
| C(19)-C(20)-C(21)  | 121.0(6) |
| C(19)-C(20)-H(20A) | 119.5    |
| C(21)-C(20)-H(20A) | 119.5    |
| C(22)-C(21)-C(20)  | 121.5(5) |
| C(22)-C(21)-H(21A) | 119.2    |
| C(20)-C(21)-H(21A) | 119.2    |
| C(21)-C(22)-C(23)  | 117.6(5) |
| C(21)-C(22)-H(22A) | 121.2    |
| C(23)-C(22)-H(22A) | 121.2    |
| C(22)-C(23)-C(18)  | 121.1(5) |
| C(22)-C(23)-C(24)  | 132.6(5) |

|                    |          |
|--------------------|----------|
| C(18)-C(23)-C(24)  | 106.2(4) |
| N(6)-C(24)-N(5)    | 126.7(5) |
| N(6)-C(24)-C(23)   | 122.5(4) |
| N(5)-C(24)-C(23)   | 110.7(4) |
| N(6)-C(25)-N(7)    | 127.0(5) |
| N(6)-C(25)-C(26)   | 123.0(4) |
| N(7)-C(25)-C(26)   | 110.0(4) |
| C(31)-C(26)-C(27)  | 121.1(5) |
| C(31)-C(26)-C(25)  | 107.3(4) |
| C(27)-C(26)-C(25)  | 131.5(5) |
| C(28)-C(27)-C(26)  | 116.6(5) |
| C(28)-C(27)-H(27A) | 121.7    |
| C(26)-C(27)-H(27A) | 121.7    |
| C(27)-C(28)-C(29)  | 121.8(5) |
| C(27)-C(28)-H(28A) | 119.1    |
| C(29)-C(28)-H(28A) | 119.1    |
| C(28)-C(29)-C(30)  | 121.3(5) |
| C(28)-C(29)-H(29A) | 119.4    |
| C(30)-C(29)-H(29A) | 119.4    |
| C(31)-C(30)-C(29)  | 116.7(5) |
| C(31)-C(30)-H(30A) | 121.7    |
| C(29)-C(30)-H(30A) | 121.7    |
| C(30)-C(31)-C(26)  | 122.5(4) |
| C(30)-C(31)-C(32)  | 131.7(5) |
| C(26)-C(31)-C(32)  | 105.8(4) |
| N(8)-C(32)-N(7)    | 127.7(4) |
| N(8)-C(32)-C(31)   | 121.4(5) |
| N(7)-C(32)-C(31)   | 110.9(4) |
| O(1)-C(33)-C(38)   | 122.1(5) |
| O(1)-C(33)-C(34)   | 121.8(5) |
| C(38)-C(33)-C(34)  | 116.1(5) |
| F(1)-C(34)-C(35)   | 119.5(5) |
| F(1)-C(34)-C(33)   | 118.7(5) |
| C(35)-C(34)-C(33)  | 121.8(5) |
| F(2)-C(35)-C(36)   | 119.4(6) |
| F(2)-C(35)-C(34)   | 120.0(6) |



|                     |          |
|---------------------|----------|
| C(36)-C(35)-C(34)   | 120.5(5) |
| F(3)-C(36)-C(35)    | 120.0(6) |
| F(3)-C(36)-C(37)    | 120.5(6) |
| C(35)-C(36)-C(37)   | 119.5(5) |
| F(4)-C(37)-C(36)    | 120.1(6) |
| F(4)-C(37)-C(38)    | 120.2(6) |
| C(36)-C(37)-C(38)   | 119.8(6) |
| F(5)-C(38)-C(37)    | 118.3(5) |
| F(5)-C(38)-C(33)    | 119.3(5) |
| C(37)-C(38)-C(33)   | 122.4(5) |
| C(2S)-C(1S)-C(6S)   | 120.0    |
| C(2S)-C(1S)-C(7S)   | 119.9(4) |
| C(6S)-C(1S)-C(7S)   | 120.1(4) |
| C(1S)-C(2S)-C(3S)   | 120.0    |
| C(1S)-C(2S)-H(2SA)  | 120.0    |
| C(3S)-C(2S)-H(2SA)  | 120.0    |
| C(4S)-C(3S)-C(2S)   | 120.0    |
| C(4S)-C(3S)-H(3SA)  | 120.0    |
| C(2S)-C(3S)-H(3SA)  | 120.0    |
| C(3S)-C(4S)-C(5S)   | 120.0    |
| C(3S)-C(4S)-H(4SA)  | 120.0    |
| C(5S)-C(4S)-H(4SA)  | 120.0    |
| C(6S)-C(5S)-C(4S)   | 120.0    |
| C(6S)-C(5S)-H(5SA)  | 120.0    |
| C(4S)-C(5S)-H(5SA)  | 120.0    |
| C(5S)-C(6S)-C(1S)   | 120.0    |
| C(5S)-C(6S)-H(6SA)  | 120.0    |
| C(1S)-C(6S)-H(6SA)  | 120.0    |
| C(1S)-C(7S)-H(7SA)  | 109.5    |
| C(1S)-C(7S)-H(7SB)  | 109.5    |
| H(7SA)-C(7S)-H(7SB) | 109.5    |
| C(1S)-C(7S)-H(7SC)  | 109.5    |
| H(7SA)-C(7S)-H(7SC) | 109.5    |
| H(7SB)-C(7S)-H(7SC) | 109.5    |
| C(9S)-C(8S)-H(8SA)  | 109.5    |
| C(9S)-C(8S)-H(8SB)  | 109.5    |

|                      |          |
|----------------------|----------|
| H(8SA)-C(8S)-H(8SB)  | 109.5    |
| C(9S)-C(8S)-H(8SC)   | 109.5    |
| H(8SA)-C(8S)-H(8SC)  | 109.5    |
| H(8SB)-C(8S)-H(8SC)  | 109.5    |
| C(10S)-C(9S)-C(8S)   | 100.8(7) |
| C(10S)-C(9S)-H(9SA)  | 111.6    |
| C(8S)-C(9S)-H(9SA)   | 111.6    |
| C(10S)-C(9S)-H(9SB)  | 111.6    |
| C(8S)-C(9S)-H(9SB)   | 111.6    |
| H(9SA)-C(9S)-H(9SB)  | 109.4    |
| C(11S)-C(10S)-C(9S)  | 107.9(8) |
| C(11S)-C(10S)-H(10A) | 110.1    |
| C(9S)-C(10S)-H(10A)  | 110.1    |
| C(11S)-C(10S)-H(10B) | 110.1    |
| C(9S)-C(10S)-H(10B)  | 110.1    |
| H(10A)-C(10S)-H(10B) | 108.4    |
| C(10S)-C(11S)-C(12S) | 109.3(8) |
| C(10S)-C(11S)-H(11B) | 109.8    |
| C(12S)-C(11S)-H(11B) | 109.8    |
| C(10S)-C(11S)-H(11C) | 109.8    |
| C(12S)-C(11S)-H(11C) | 109.8    |
| H(11B)-C(11S)-H(11C) | 108.3    |
| C(11S)-C(12S)-C(13S) | 102.2(7) |
| C(11S)-C(12S)-H(12B) | 111.3    |
| C(13S)-C(12S)-H(12B) | 111.3    |
| C(11S)-C(12S)-H(12C) | 111.3    |
| C(13S)-C(12S)-H(12C) | 111.3    |
| H(12B)-C(12S)-H(12C) | 109.2    |
| C(14S)-C(13S)-C(12S) | 102.0(7) |
| C(14S)-C(13S)-H(13B) | 111.4    |
| C(12S)-C(13S)-H(13B) | 111.4    |
| C(14S)-C(13S)-H(13C) | 111.4    |
| C(12S)-C(13S)-H(13C) | 111.4    |
| H(13B)-C(13S)-H(13C) | 109.2    |
| C(13S)-C(14S)-H(14B) | 109.5    |
| C(13S)-C(14S)-H(14C) | 109.5    |

H(14B)-C(14S)-H(14C) 109.5

C(13S)-C(14S)-H(14D) 109.5

H(14B)-C(14S)-H(14D) 109.5

H(14C)-C(14S)-H(14D) 109.5

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Symmetry transformations used to generate equivalent atoms:

**Table S4.** Anisotropic displacement parameters ( $\text{\AA}^2 \times 10^3$ ) for F<sub>5</sub>PhO-AlPc. The anisotropic displacement factor exponent takes the form:  $-2p^2[ h^2 a^{*2} U^{11} + \dots + 2 h k a^* b^* U^{12} ]$

|       | U <sup>11</sup> | U <sup>22</sup> | U <sup>33</sup> | U <sup>23</sup> | U <sup>13</sup> | U <sup>12</sup> |
|-------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Al(1) | 38(1)           | 36(1)           | 20(1)           | -1(1)           | 3(1)            | 1(1)            |
| F(1)  | 69(2)           | 60(2)           | 39(2)           | -9(2)           | 2(2)            | 10(2)           |
| F(2)  | 87(3)           | 66(3)           | 83(3)           | -39(2)          | -16(2)          | 6(2)            |
| F(3)  | 73(3)           | 36(2)           | 144(4)          | -12(2)          | -2(3)           | -7(2)           |
| F(4)  | 90(3)           | 50(2)           | 99(3)           | 27(2)           | 18(2)           | 2(2)            |
| F(5)  | 66(2)           | 54(2)           | 43(2)           | 6(2)            | 1(2)            | 5(2)            |
| O(1)  | 36(2)           | 32(2)           | 40(2)           | -4(1)           | 4(2)            | 1(2)            |
| N(1)  | 29(2)           | 38(2)           | 22(2)           | -4(2)           | -1(2)           | -1(2)           |
| N(2)  | 35(2)           | 36(2)           | 24(2)           | -2(2)           | 3(2)            | -4(2)           |
| N(3)  | 39(2)           | 36(2)           | 24(2)           | -3(2)           | 6(2)            | -1(2)           |
| N(4)  | 35(2)           | 39(2)           | 29(2)           | 0(2)            | 8(2)            | -3(2)           |
| N(5)  | 45(3)           | 34(2)           | 21(2)           | -2(2)           | 0(2)            | 0(2)            |
| N(6)  | 53(3)           | 38(2)           | 20(2)           | -3(2)           | 6(2)            | -2(2)           |
| N(7)  | 43(3)           | 37(2)           | 24(2)           | 0(2)            | 5(2)            | 2(2)            |
| N(8)  | 35(2)           | 37(2)           | 22(2)           | -2(2)           | 1(2)            | -1(2)           |
| C(1)  | 32(3)           | 35(3)           | 21(2)           | -1(2)           | 1(2)            | 0(2)            |
| C(2)  | 29(3)           | 42(3)           | 23(2)           | -4(2)           | 2(2)            | -2(2)           |
| C(3)  | 36(3)           | 41(3)           | 28(2)           | -5(2)           | 7(2)            | -2(2)           |
| C(4)  | 48(3)           | 45(3)           | 26(2)           | -1(2)           | 8(2)            | -6(3)           |
| C(5)  | 47(3)           | 49(3)           | 28(2)           | 2(2)            | 4(2)            | 2(3)            |
| C(6)  | 44(3)           | 43(3)           | 21(2)           | 2(2)            | 3(2)            | -3(2)           |
| C(7)  | 35(3)           | 37(3)           | 21(2)           | -1(2)           | 4(2)            | -1(2)           |
| C(8)  | 32(3)           | 35(3)           | 20(2)           | -2(2)           | 0(2)            | 1(2)            |
| C(9)  | 37(3)           | 33(3)           | 27(2)           | 1(2)            | 9(2)            | 0(2)            |
| C(10) | 31(3)           | 36(3)           | 27(2)           | -2(2)           | -2(2)           | 0(2)            |
| C(11) | 46(3)           | 38(3)           | 32(3)           | 1(2)            | -4(2)           | -1(2)           |
| C(12) | 51(4)           | 48(3)           | 35(3)           | 1(2)            | -14(3)          | -7(3)           |
| C(13) | 50(4)           | 43(3)           | 45(3)           | 7(2)            | -15(3)          | -9(3)           |
| C(14) | 45(3)           | 38(3)           | 40(3)           | 4(2)            | 1(2)            | -7(3)           |
| C(15) | 29(3)           | 39(3)           | 31(2)           | 1(2)            | 0(2)            | -1(2)           |
| C(16) | 38(3)           | 31(3)           | 29(2)           | -3(2)           | 9(2)            | 0(2)            |

|        |         |        |         |         |        |         |
|--------|---------|--------|---------|---------|--------|---------|
| C(17)  | 44(3)   | 34(3)  | 29(2)   | -2(2)   | 9(2)   | -1(2)   |
| C(18)  | 53(3)   | 36(3)  | 29(2)   | -1(2)   | 13(2)  | -4(2)   |
| C(19)  | 61(4)   | 48(3)  | 39(3)   | -5(2)   | 21(3)  | -10(3)  |
| C(20)  | 77(5)   | 51(3)  | 39(3)   | 1(3)    | 28(3)  | -10(3)  |
| C(21)  | 76(5)   | 49(3)  | 34(3)   | 3(2)    | 23(3)  | 2(3)    |
| C(22)  | 63(4)   | 48(3)  | 29(3)   | 0(2)    | 16(3)  | 1(3)    |
| C(23)  | 54(3)   | 39(3)  | 22(2)   | 1(2)    | 10(2)  | -1(3)   |
| C(24)  | 50(3)   | 36(3)  | 24(2)   | -2(2)   | 4(2)   | 2(2)    |
| C(25)  | 45(3)   | 36(3)  | 23(2)   | 0(2)    | 4(2)   | 3(2)    |
| C(26)  | 48(3)   | 39(3)  | 21(2)   | -4(2)   | -2(2)  | 3(2)    |
| C(27)  | 51(4)   | 45(3)  | 26(3)   | -1(2)   | -2(2)  | 3(3)    |
| C(28)  | 52(4)   | 49(3)  | 27(2)   | -4(2)   | -11(2) | 6(3)    |
| C(29)  | 51(4)   | 45(3)  | 32(3)   | -5(2)   | -13(2) | 1(3)    |
| C(30)  | 49(3)   | 41(3)  | 30(3)   | 0(2)    | -4(2)  | 4(3)    |
| C(31)  | 42(3)   | 38(3)  | 22(2)   | -1(2)   | -5(2)  | -3(2)   |
| C(32)  | 33(3)   | 36(3)  | 21(2)   | -2(2)   | 1(2)   | 2(2)    |
| C(33)  | 38(3)   | 31(3)  | 42(3)   | -3(2)   | 2(2)   | 5(2)    |
| C(34)  | 51(4)   | 43(3)  | 39(3)   | -9(2)   | -2(3)  | 1(3)    |
| C(35)  | 53(4)   | 49(4)  | 63(4)   | -22(3)  | -7(3)  | 8(3)    |
| C(36)  | 47(4)   | 30(3)  | 94(5)   | -6(3)   | 0(3)   | -1(3)   |
| C(37)  | 56(4)   | 40(3)  | 70(4)   | 12(3)   | 10(3)  | 5(3)    |
| C(38)  | 49(4)   | 45(3)  | 42(3)   | 2(2)    | 4(3)   | 2(3)    |
| C(1S)  | 58(3)   | 71(10) | 117(10) | -13(7)  | 43(8)  | -16(8)  |
| C(2S)  | 58(3)   | 71(10) | 117(10) | -13(7)  | 43(8)  | -16(8)  |
| C(3S)  | 58(3)   | 71(10) | 117(10) | -13(7)  | 43(8)  | -16(8)  |
| C(4S)  | 58(3)   | 71(10) | 117(10) | -13(7)  | 43(8)  | -16(8)  |
| C(5S)  | 58(3)   | 71(10) | 117(10) | -13(7)  | 43(8)  | -16(8)  |
| C(6S)  | 58(3)   | 71(10) | 117(10) | -13(7)  | 43(8)  | -16(8)  |
| C(7S)  | 92(14)  | 90(12) | 108(13) | -28(10) | 26(11) | 0(10)   |
| C(8S)  | 400(20) | 96(7)  | 103(8)  | -17(6)  | 12(9)  | -53(10) |
| C(9S)  | 400(20) | 96(7)  | 103(8)  | -17(6)  | 12(9)  | -53(10) |
| C(10S) | 400(20) | 96(7)  | 103(8)  | -17(6)  | 12(9)  | -53(10) |
| C(11S) | 400(20) | 96(7)  | 103(8)  | -17(6)  | 12(9)  | -53(10) |
| C(12S) | 400(20) | 96(7)  | 103(8)  | -17(6)  | 12(9)  | -53(10) |
| C(13S) | 400(20) | 96(7)  | 103(8)  | -17(6)  | 12(9)  | -53(10) |
| C(14S) | 400(20) | 96(7)  | 103(8)  | -17(6)  | 12(9)  | -53(10) |

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**Table S5.** Hydrogen coordinates ( $\times 10^4$ ) and isotropic displacement parameters ( $\text{\AA}^2 \times 10^{-3}$ )  
For F<sub>5</sub>PhO-AlPc.

|        | x     | y     | z    | U(eq) |
|--------|-------|-------|------|-------|
| H(3A)  | 10006 | 6786  | 4444 | 42    |
| H(4A)  | 9962  | 7151  | 3520 | 48    |
| H(5A)  | 8377  | 6509  | 2840 | 50    |
| H(6A)  | 6771  | 5498  | 3059 | 43    |
| H(11A) | 3667  | 3533  | 3061 | 48    |
| H(12A) | 1904  | 2472  | 2854 | 56    |
| H(13A) | 1163  | 1630  | 3543 | 59    |
| H(14A) | 2082  | 1846  | 4464 | 50    |
| H(19A) | 3097  | 1557  | 6115 | 57    |
| H(20A) | 3254  | 1121  | 7038 | 64    |
| H(21A) | 4788  | 1834  | 7718 | 62    |
| H(22A) | 6180  | 2999  | 7500 | 55    |
| H(27A) | 9118  | 5013  | 7499 | 50    |
| H(28A) | 10856 | 6065  | 7721 | 53    |
| H(29A) | 11722 | 6853  | 7046 | 54    |
| H(30A) | 10883 | 6607  | 6107 | 49    |
| H(2SA) | 10175 | 8751  | 5790 | 94    |
| H(3SA) | 9576  | 8282  | 4879 | 94    |
| H(4SA) | 9423  | 9377  | 4174 | 94    |
| H(5SA) | 9869  | 10942 | 4380 | 94    |
| H(6SA) | 10467 | 11411 | 5291 | 94    |
| H(7SA) | 10743 | 9896  | 6468 | 143   |
| H(7SB) | 10050 | 10875 | 6310 | 143   |
| H(7SC) | 11581 | 10742 | 6287 | 143   |
| H(8SA) | 7833  | 9869  | 7712 | 303   |
| H(8SB) | 7725  | 9894  | 7060 | 303   |
| H(8SC) | 8574  | 10662 | 7429 | 303   |
| H(9SA) | 9993  | 9348  | 7832 | 242   |

|        |       |       |      |     |
|--------|-------|-------|------|-----|
| H(9SB) | 9291  | 8758  | 7309 | 242 |
| H(10A) | 9710  | 10177 | 6776 | 242 |
| H(10B) | 10797 | 10418 | 7300 | 242 |
| H(11B) | 11504 | 9536  | 6589 | 242 |
| H(11C) | 10714 | 8688  | 6800 | 242 |
| H(12B) | 11996 | 8791  | 7673 | 242 |
| H(12C) | 12751 | 9686  | 7485 | 242 |
| H(13B) | 13228 | 7853  | 7256 | 242 |
| H(13C) | 12821 | 8416  | 6690 | 242 |
| H(14B) | 15132 | 8581  | 7088 | 303 |
| H(14C) | 14659 | 9141  | 7579 | 303 |
| H(14D) | 14377 | 9549  | 6970 | 303 |

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**Table S6.** Torsion angles [°] for F<sub>5</sub>PhO-AlPc.

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|                       |           |
|-----------------------|-----------|
| N(7)-Al(1)-O(1)-C(33) | 137.5(4)  |
| N(3)-Al(1)-O(1)-C(33) | -42.2(4)  |
| N(1)-Al(1)-O(1)-C(33) | -131.7(4) |
| N(5)-Al(1)-O(1)-C(33) | 47.6(4)   |
| C(32)-N(8)-C(1)-N(1)  | -1.6(8)   |
| C(32)-N(8)-C(1)-C(2)  | 177.8(5)  |
| C(8)-N(1)-C(1)-N(8)   | 179.3(5)  |
| Al(1)-N(1)-C(1)-N(8)  | -12.7(7)  |
| C(8)-N(1)-C(1)-C(2)   | -0.3(5)   |
| Al(1)-N(1)-C(1)-C(2)  | 167.8(3)  |
| N(8)-C(1)-C(2)-C(3)   | 2.4(9)    |
| N(1)-C(1)-C(2)-C(3)   | -178.1(5) |
| N(8)-C(1)-C(2)-C(7)   | -179.5(4) |
| N(1)-C(1)-C(2)-C(7)   | 0.1(6)    |
| C(7)-C(2)-C(3)-C(4)   | -0.8(7)   |
| C(1)-C(2)-C(3)-C(4)   | 177.1(5)  |
| C(2)-C(3)-C(4)-C(5)   | 0.5(8)    |
| C(3)-C(4)-C(5)-C(6)   | 0.4(9)    |
| C(4)-C(5)-C(6)-C(7)   | -1.0(8)   |
| C(5)-C(6)-C(7)-C(2)   | 0.7(8)    |
| C(5)-C(6)-C(7)-C(8)   | -177.1(5) |
| C(3)-C(2)-C(7)-C(6)   | 0.2(8)    |
| C(1)-C(2)-C(7)-C(6)   | -178.1(5) |
| C(3)-C(2)-C(7)-C(8)   | 178.5(5)  |
| C(1)-C(2)-C(7)-C(8)   | 0.1(5)    |
| C(9)-N(2)-C(8)-N(1)   | 1.3(8)    |
| C(9)-N(2)-C(8)-C(7)   | -179.0(5) |
| C(1)-N(1)-C(8)-N(2)   | -179.9(5) |
| Al(1)-N(1)-C(8)-N(2)  | 12.2(7)   |
| C(1)-N(1)-C(8)-C(7)   | 0.3(5)    |
| Al(1)-N(1)-C(8)-C(7)  | -167.5(3) |
| C(6)-C(7)-C(8)-N(2)   | -2.0(9)   |
| C(2)-C(7)-C(8)-N(2)   | 180.0(5)  |
| C(6)-C(7)-C(8)-N(1)   | 177.7(5)  |

|                         |           |
|-------------------------|-----------|
| C(2)-C(7)-C(8)-N(1)     | -0.3(6)   |
| C(8)-N(2)-C(9)-N(3)     | 0.8(8)    |
| C(8)-N(2)-C(9)-C(10)    | -178.0(5) |
| C(16)-N(3)-C(9)-N(2)    | -178.3(5) |
| Al(1)-N(3)-C(9)-N(2)    | -16.4(7)  |
| C(16)-N(3)-C(9)-C(10)   | 0.5(5)    |
| Al(1)-N(3)-C(9)-C(10)   | 162.5(3)  |
| N(2)-C(9)-C(10)-C(15)   | 178.7(5)  |
| N(3)-C(9)-C(10)-C(15)   | -0.2(6)   |
| N(2)-C(9)-C(10)-C(11)   | -0.2(9)   |
| N(3)-C(9)-C(10)-C(11)   | -179.2(5) |
| C(15)-C(10)-C(11)-C(12) | -0.2(8)   |
| C(9)-C(10)-C(11)-C(12)  | 178.6(5)  |
| C(10)-C(11)-C(12)-C(13) | -0.7(9)   |
| C(11)-C(12)-C(13)-C(14) | 1.2(9)    |
| C(12)-C(13)-C(14)-C(15) | -0.8(9)   |
| C(13)-C(14)-C(15)-C(10) | 0.0(8)    |
| C(13)-C(14)-C(15)-C(16) | -177.9(5) |
| C(11)-C(10)-C(15)-C(14) | 0.6(8)    |
| C(9)-C(10)-C(15)-C(14)  | -178.5(5) |
| C(11)-C(10)-C(15)-C(16) | 178.9(5)  |
| C(9)-C(10)-C(15)-C(16)  | -0.2(6)   |
| C(17)-N(4)-C(16)-N(3)   | -1.2(8)   |
| C(17)-N(4)-C(16)-C(15)  | 178.9(5)  |
| C(9)-N(3)-C(16)-N(4)    | 179.5(5)  |
| Al(1)-N(3)-C(16)-N(4)   | 17.1(7)   |
| C(9)-N(3)-C(16)-C(15)   | -0.6(5)   |
| Al(1)-N(3)-C(16)-C(15)  | -163.0(3) |
| C(14)-C(15)-C(16)-N(4)  | -1.4(9)   |
| C(10)-C(15)-C(16)-N(4)  | -179.6(5) |
| C(14)-C(15)-C(16)-N(3)  | 178.7(5)  |
| C(10)-C(15)-C(16)-N(3)  | 0.5(6)    |
| C(16)-N(4)-C(17)-N(5)   | 1.4(8)    |
| C(16)-N(4)-C(17)-C(18)  | -178.4(5) |
| C(24)-N(5)-C(17)-N(4)   | 178.4(5)  |
| Al(1)-N(5)-C(17)-N(4)   | -17.5(7)  |

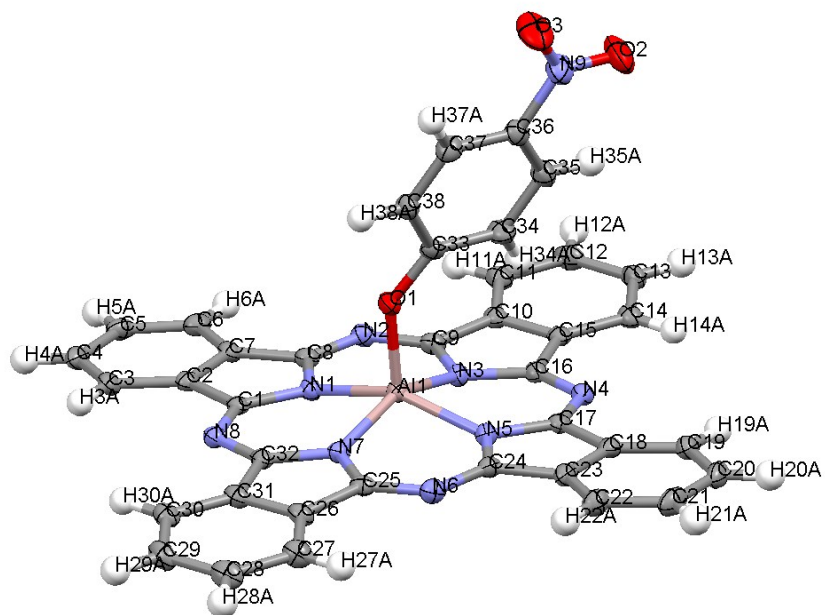
|                         |           |
|-------------------------|-----------|
| C(24)-N(5)-C(17)-C(18)  | -1.8(6)   |
| Al(1)-N(5)-C(17)-C(18)  | 162.4(4)  |
| N(4)-C(17)-C(18)-C(19)  | 4.1(10)   |
| N(5)-C(17)-C(18)-C(19)  | -175.8(6) |
| N(4)-C(17)-C(18)-C(23)  | -178.2(5) |
| N(5)-C(17)-C(18)-C(23)  | 2.0(6)    |
| C(23)-C(18)-C(19)-C(20) | 0.3(9)    |
| C(17)-C(18)-C(19)-C(20) | 177.9(6)  |
| C(18)-C(19)-C(20)-C(21) | 0.0(9)    |
| C(19)-C(20)-C(21)-C(22) | 0.2(10)   |
| C(20)-C(21)-C(22)-C(23) | -0.7(9)   |
| C(21)-C(22)-C(23)-C(18) | 1.0(8)    |
| C(21)-C(22)-C(23)-C(24) | -175.8(6) |
| C(19)-C(18)-C(23)-C(22) | -0.8(9)   |
| C(17)-C(18)-C(23)-C(22) | -178.9(5) |
| C(19)-C(18)-C(23)-C(24) | 176.7(5)  |
| C(17)-C(18)-C(23)-C(24) | -1.4(6)   |
| C(25)-N(6)-C(24)-N(5)   | -0.2(8)   |
| C(25)-N(6)-C(24)-C(23)  | 177.3(5)  |
| C(17)-N(5)-C(24)-N(6)   | 178.6(5)  |
| Al(1)-N(5)-C(24)-N(6)   | 14.8(7)   |
| C(17)-N(5)-C(24)-C(23)  | 0.9(6)    |
| Al(1)-N(5)-C(24)-C(23)  | -162.9(4) |
| C(22)-C(23)-C(24)-N(6)  | -0.3(10)  |
| C(18)-C(23)-C(24)-N(6)  | -177.5(5) |
| C(22)-C(23)-C(24)-N(5)  | 177.5(6)  |
| C(18)-C(23)-C(24)-N(5)  | 0.4(6)    |
| C(24)-N(6)-C(25)-N(7)   | -2.8(8)   |
| C(24)-N(6)-C(25)-C(26)  | 177.8(5)  |
| C(32)-N(7)-C(25)-N(6)   | 180.0(5)  |
| Al(1)-N(7)-C(25)-N(6)   | -9.1(8)   |
| C(32)-N(7)-C(25)-C(26)  | -0.5(6)   |
| Al(1)-N(7)-C(25)-C(26)  | 170.4(3)  |
| N(6)-C(25)-C(26)-C(31)  | 179.3(5)  |
| N(7)-C(25)-C(26)-C(31)  | -0.3(6)   |
| N(6)-C(25)-C(26)-C(27)  | -1.4(9)   |

|                         |           |
|-------------------------|-----------|
| N(7)-C(25)-C(26)-C(27)  | 179.0(5)  |
| C(31)-C(26)-C(27)-C(28) | 0.3(8)    |
| C(25)-C(26)-C(27)-C(28) | -178.9(5) |
| C(26)-C(27)-C(28)-C(29) | -0.2(8)   |
| C(27)-C(28)-C(29)-C(30) | -0.3(9)   |
| C(28)-C(29)-C(30)-C(31) | 0.6(8)    |
| C(29)-C(30)-C(31)-C(26) | -0.5(8)   |
| C(29)-C(30)-C(31)-C(32) | 177.6(5)  |
| C(27)-C(26)-C(31)-C(30) | 0.0(8)    |
| C(25)-C(26)-C(31)-C(30) | 179.4(5)  |
| C(27)-C(26)-C(31)-C(32) | -178.5(5) |
| C(25)-C(26)-C(31)-C(32) | 0.9(6)    |
| C(1)-N(8)-C(32)-N(7)    | 2.7(8)    |
| C(1)-N(8)-C(32)-C(31)   | -176.6(5) |
| C(25)-N(7)-C(32)-N(8)   | -178.2(5) |
| Al(1)-N(7)-C(32)-N(8)   | 10.8(7)   |
| C(25)-N(7)-C(32)-C(31)  | 1.1(5)    |
| Al(1)-N(7)-C(32)-C(31)  | -169.9(3) |
| C(30)-C(31)-C(32)-N(8)  | -0.2(9)   |
| C(26)-C(31)-C(32)-N(8)  | 178.1(5)  |
| C(30)-C(31)-C(32)-N(7)  | -179.5(6) |
| C(26)-C(31)-C(32)-N(7)  | -1.2(6)   |
| Al(1)-O(1)-C(33)-C(38)  | -90.5(6)  |
| Al(1)-O(1)-C(33)-C(34)  | 92.4(6)   |
| O(1)-C(33)-C(34)-F(1)   | -0.7(8)   |
| C(38)-C(33)-C(34)-F(1)  | -178.0(5) |
| O(1)-C(33)-C(34)-C(35)  | 178.4(6)  |
| C(38)-C(33)-C(34)-C(35) | 1.1(9)    |
| F(1)-C(34)-C(35)-F(2)   | -0.1(9)   |
| C(33)-C(34)-C(35)-F(2)  | -179.2(6) |
| F(1)-C(34)-C(35)-C(36)  | 178.5(6)  |
| C(33)-C(34)-C(35)-C(36) | -0.5(10)  |
| F(2)-C(35)-C(36)-F(3)   | -0.5(10)  |
| C(34)-C(35)-C(36)-F(3)  | -179.1(6) |
| F(2)-C(35)-C(36)-C(37)  | 178.6(6)  |
| C(34)-C(35)-C(36)-C(37) | 0.0(10)   |

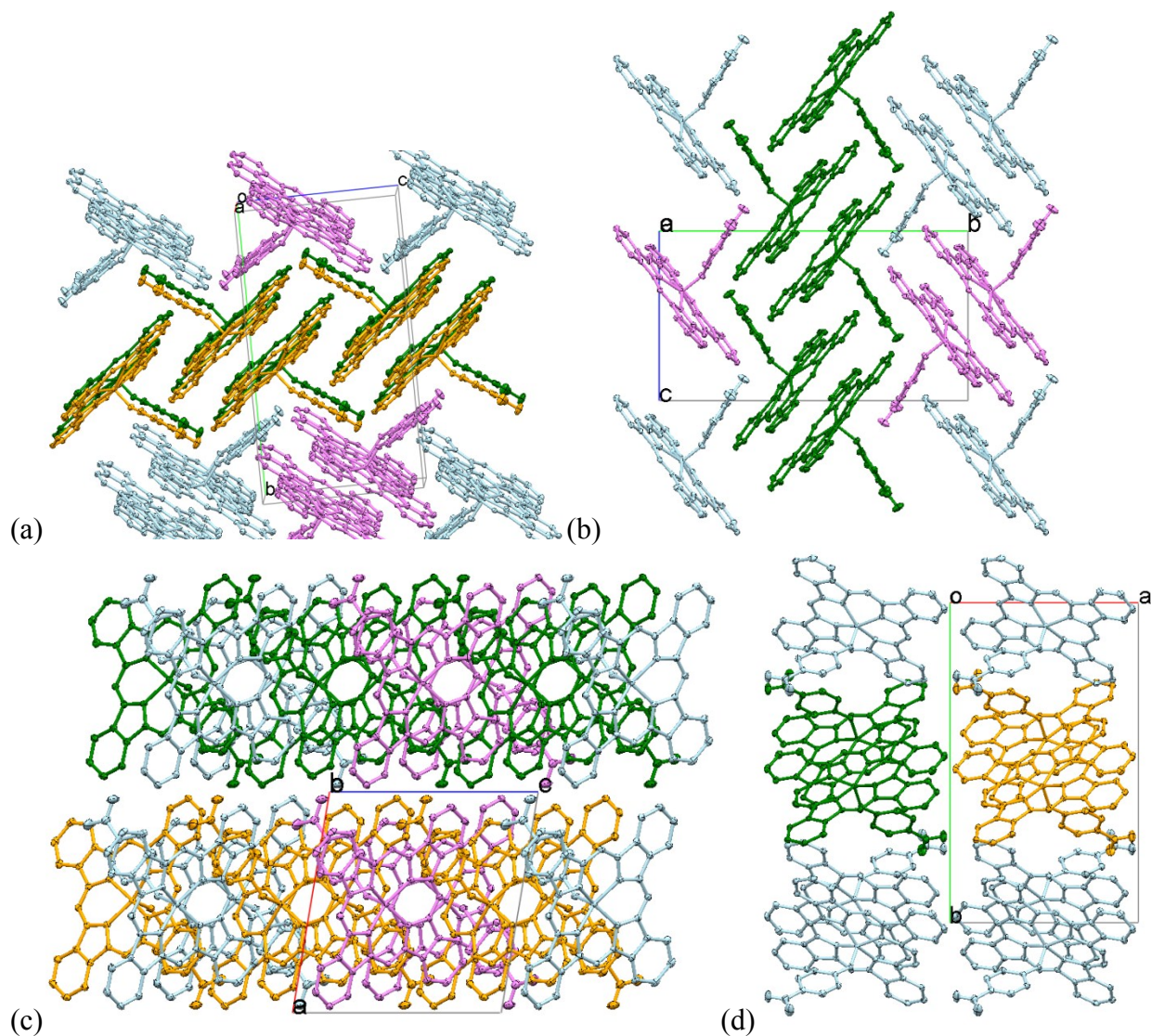
|                             |            |
|-----------------------------|------------|
| F(3)-C(36)-C(37)-F(4)       | 0.2(10)    |
| C(35)-C(36)-C(37)-F(4)      | -178.9(6)  |
| F(3)-C(36)-C(37)-C(38)      | 179.1(6)   |
| C(35)-C(36)-C(37)-C(38)     | 0.0(10)    |
| F(4)-C(37)-C(38)-F(5)       | 0.6(9)     |
| C(36)-C(37)-C(38)-F(5)      | -178.3(6)  |
| F(4)-C(37)-C(38)-C(33)      | 179.5(6)   |
| C(36)-C(37)-C(38)-C(33)     | 0.6(10)    |
| O(1)-C(33)-C(38)-F(5)       | 0.5(9)     |
| C(34)-C(33)-C(38)-F(5)      | 177.8(5)   |
| O(1)-C(33)-C(38)-C(37)      | -178.4(6)  |
| C(34)-C(33)-C(38)-C(37)     | -1.1(9)    |
| C(6S)-C(1S)-C(2S)-C(3S)     | 0.0        |
| C(7S)-C(1S)-C(2S)-C(3S)     | 177.7(14)  |
| C(1S)-C(2S)-C(3S)-C(4S)     | 0.0        |
| C(2S)-C(3S)-C(4S)-C(5S)     | 0.0        |
| C(3S)-C(4S)-C(5S)-C(6S)     | 0.0        |
| C(4S)-C(5S)-C(6S)-C(1S)     | 0.0        |
| C(2S)-C(1S)-C(6S)-C(5S)     | 0.0        |
| C(7S)-C(1S)-C(6S)-C(5S)     | -177.6(14) |
| C(8S)-C(9S)-C(10S)-C(11S)   | -157.1(16) |
| C(9S)-C(10S)-C(11S)-C(12S)  | -77.0(13)  |
| C(10S)-C(11S)-C(12S)-C(13S) | -176.5(14) |
| C(11S)-C(12S)-C(13S)-C(14S) | 125.7(18)  |

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Symmetry transformations used to generate equivalent atoms:



**Figure S5.** Molecular structure of NO<sub>2</sub>PhO-AlPc. Elipsoids shown at 50% probability level. Carbon – grey; nitroben – blue; aluminum – pink; oxygen – red; hydrogen – white. CCDC deposition number 1052023.



**Figure S6.** Solid state arrangement of NO<sub>2</sub>PhO-AlPc as determined by x-ray diffraction of a single crystal grown by sublimation. (a) General solid state arrangement; (b) Solid-state arrangement along the b-c plane; (c) Solid-state arrangement along the a-c plane; (d) Solid-state arrangement along the a-b plane.

**Table S7.** Crystal data and structure refinement for NO<sub>2</sub>PhO-AlPc.

|                                   |                                                                  |                 |
|-----------------------------------|------------------------------------------------------------------|-----------------|
| CCDC Deposition Number            | 1052023                                                          |                 |
| Identification code               | NO <sub>2</sub> PhO-AlPc                                         |                 |
| Empirical formula                 | C <sub>38</sub> H <sub>20</sub> Al N <sub>9</sub> O <sub>3</sub> |                 |
| Formula weight                    | 677.61                                                           |                 |
| Temperature                       | 147(2) K                                                         |                 |
| Wavelength                        | 0.71073 Å                                                        |                 |
| Crystal system                    | Monoclinic                                                       |                 |
| Space group                       | P 21/c                                                           |                 |
| Unit cell dimensions              | a = 12.4623(6) Å                                                 | α = 90°.        |
|                                   | b = 20.8620(11) Å                                                | β = 99.518(2)°. |
|                                   | c = 11.6002(6) Å                                                 | γ = 90°.        |
| Volume                            | 2974.4(3) Å <sup>3</sup>                                         |                 |
| Z                                 | 4                                                                |                 |
| Density (calculated)              | 1.513 Mg/m <sup>3</sup>                                          |                 |
| Absorption coefficient            | 0.128 mm <sup>-1</sup>                                           |                 |
| F(000)                            | 1392                                                             |                 |
| Crystal size                      | 0.160 x 0.120 x 0.080 mm <sup>3</sup>                            |                 |
| Theta range for data collection   | 1.657 to 27.582°.                                                |                 |
| Index ranges                      | -16 ≤ h ≤ 16, -27 ≤ k ≤ 26, -15 ≤ l ≤ 13                         |                 |
| Reflections collected             | 24158                                                            |                 |
| Independent reflections           | 6837 [R(int) = 0.0814]                                           |                 |
| Completeness to theta = 25.242°   | 99.9 %                                                           |                 |
| Absorption correction             | Semi-empirical from equivalents                                  |                 |
| Max. and min. transmission        | 0.7456 and 0.6904                                                |                 |
| Refinement method                 | Full-matrix least-squares on F <sup>2</sup>                      |                 |
| Data / restraints / parameters    | 6837 / 0 / 460                                                   |                 |
| Goodness-of-fit on F <sup>2</sup> | 1.002                                                            |                 |
| Final R indices [I > 2σ(I)]       | R1 = 0.0507, wR2 = 0.0972                                        |                 |
| R indices (all data)              | R1 = 0.1093, wR2 = 0.1175                                        |                 |
| Extinction coefficient            | n/a                                                              |                 |
| Largest diff. peak and hole       | 0.283 and -0.314 e.Å <sup>-3</sup>                               |                 |



**Table S8.** Atomic coordinates (  $\times 10^4$ ) and equivalent isotropic displacement parameters ( $\text{\AA}^2 \times 10^3$ )

for NO<sub>2</sub>PhO-AlPc. U(eq) is defined as one third of the trace of the orthogonalized  $U_{ij}$  tensor.

|       | x       | y       | z        | U(eq) |
|-------|---------|---------|----------|-------|
| Al(1) | 4918(1) | 5734(1) | 1428(1)  | 16(1) |
| O(1)  | 5278(1) | 6391(1) | 2367(1)  | 22(1) |
| O(2)  | 9652(1) | 7303(1) | 5313(2)  | 49(1) |
| O(3)  | 8520(2) | 7731(1) | 6289(2)  | 50(1) |
| N(1)  | 3958(1) | 6155(1) | 150(2)   | 17(1) |
| N(2)  | 5246(1) | 6469(1) | -1106(2) | 19(1) |
| N(3)  | 6016(1) | 5707(1) | 393(2)   | 17(1) |
| N(4)  | 7390(1) | 5027(1) | 1521(2)  | 19(1) |
| N(5)  | 5685(1) | 5017(1) | 2276(2)  | 17(1) |
| N(6)  | 4378(1) | 4689(1) | 3498(2)  | 20(1) |
| N(7)  | 3609(1) | 5440(1) | 1995(2)  | 17(1) |
| N(8)  | 2223(1) | 6091(1) | 833(2)   | 18(1) |
| N(9)  | 8718(2) | 7395(1) | 5482(2)  | 31(1) |
| C(1)  | 2873(2) | 6302(1) | 123(2)   | 16(1) |
| C(2)  | 2500(2) | 6740(1) | -818(2)  | 18(1) |
| C(3)  | 1487(2) | 7029(1) | -1178(2) | 21(1) |
| C(4)  | 1387(2) | 7413(1) | -2152(2) | 24(1) |
| C(5)  | 2265(2) | 7518(1) | -2748(2) | 24(1) |
| C(6)  | 3273(2) | 7246(1) | -2372(2) | 23(1) |
| C(7)  | 3374(2) | 6851(1) | -1394(2) | 18(1) |
| C(8)  | 4280(2) | 6478(1) | -781(2)  | 18(1) |
| C(9)  | 6045(2) | 6113(1) | -549(2)  | 19(1) |
| C(10) | 7123(2) | 6108(1) | -869(2)  | 19(1) |
| C(11) | 7579(2) | 6457(1) | -1689(2) | 22(1) |
| C(12) | 8673(2) | 6361(1) | -1720(2) | 25(1) |
| C(13) | 9291(2) | 5923(1) | -971(2)  | 25(1) |
| C(14) | 8835(2) | 5574(1) | -164(2)  | 21(1) |
| C(15) | 7739(2) | 5678(1) | -116(2)  | 19(1) |

|       |         |         |         |       |
|-------|---------|---------|---------|-------|
| C(16) | 7041(2) | 5433(1) | 662(2)  | 18(1) |
| C(17) | 6755(2) | 4837(1) | 2264(2) | 18(1) |
| C(18) | 7123(2) | 4397(1) | 3218(2) | 20(1) |
| C(19) | 8108(2) | 4088(1) | 3590(2) | 23(1) |
| C(20) | 8174(2) | 3700(1) | 4566(2) | 27(1) |
| C(21) | 7289(2) | 3616(1) | 5150(2) | 29(1) |
| C(22) | 6302(2) | 3915(1) | 4777(2) | 25(1) |
| C(23) | 6240(2) | 4308(1) | 3798(2) | 21(1) |
| C(24) | 5357(2) | 4690(1) | 3192(2) | 18(1) |
| C(25) | 3565(2) | 5028(1) | 2922(2) | 18(1) |
| C(26) | 2479(2) | 5010(1) | 3213(2) | 20(1) |
| C(27) | 2027(2) | 4660(1) | 4026(2) | 25(1) |
| C(28) | 927(2)  | 4754(1) | 4049(2) | 27(1) |
| C(29) | 308(2)  | 5190(1) | 3302(2) | 26(1) |
| C(30) | 766(2)  | 5545(1) | 2500(2) | 22(1) |
| C(31) | 1859(2) | 5436(1) | 2454(2) | 20(1) |
| C(32) | 2571(2) | 5688(1) | 1694(2) | 18(1) |
| C(33) | 6116(2) | 6606(1) | 3121(2) | 19(1) |
| C(34) | 7194(2) | 6503(1) | 2976(2) | 26(1) |
| C(35) | 8045(2) | 6754(1) | 3761(2) | 26(1) |
| C(36) | 7823(2) | 7108(1) | 4697(2) | 22(1) |
| C(37) | 6766(2) | 7219(1) | 4869(2) | 23(1) |
| C(38) | 5921(2) | 6970(1) | 4083(2) | 22(1) |

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**Table S9.** Bond lengths [Å] and angles [°] for NO<sub>2</sub>PhO-AlPc.

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|            |            |
|------------|------------|
| Al(1)-O(1) | 1.7615(17) |
| Al(1)-N(1) | 1.9520(18) |
| Al(1)-N(5) | 1.9520(19) |
| Al(1)-N(7) | 1.9559(19) |
| Al(1)-N(3) | 1.965(2)   |
| O(1)-C(33) | 1.326(2)   |
| O(2)-N(9)  | 1.226(3)   |
| O(3)-N(9)  | 1.228(3)   |
| N(1)-C(1)  | 1.381(3)   |
| N(1)-C(8)  | 1.388(3)   |
| N(2)-C(8)  | 1.321(3)   |
| N(2)-C(9)  | 1.321(3)   |
| N(3)-C(16) | 1.387(3)   |
| N(3)-C(9)  | 1.387(3)   |
| N(4)-C(17) | 1.324(3)   |
| N(4)-C(16) | 1.325(3)   |
| N(5)-C(24) | 1.381(3)   |
| N(5)-C(17) | 1.388(3)   |
| N(6)-C(25) | 1.322(3)   |
| N(6)-C(24) | 1.325(3)   |
| N(7)-C(32) | 1.384(3)   |
| N(7)-C(25) | 1.385(3)   |
| N(8)-C(32) | 1.322(3)   |
| N(8)-C(1)  | 1.324(3)   |
| N(9)-C(36) | 1.447(3)   |
| C(1)-C(2)  | 1.441(3)   |
| C(2)-C(7)  | 1.389(3)   |
| C(2)-C(3)  | 1.399(3)   |
| C(3)-C(4)  | 1.374(3)   |
| C(3)-H(3A) | 0.9500     |
| C(4)-C(5)  | 1.406(3)   |
| C(4)-H(4A) | 0.9500     |
| C(5)-C(6)  | 1.381(3)   |
| C(5)-H(5A) | 0.9500     |

|              |          |
|--------------|----------|
| C(6)-C(7)    | 1.392(3) |
| C(6)-H(6A)   | 0.9500   |
| C(7)-C(8)    | 1.455(3) |
| C(9)-C(10)   | 1.452(3) |
| C(10)-C(15)  | 1.391(3) |
| C(10)-C(11)  | 1.392(3) |
| C(11)-C(12)  | 1.384(3) |
| C(11)-H(11A) | 0.9500   |
| C(12)-C(13)  | 1.401(3) |
| C(12)-H(12A) | 0.9500   |
| C(13)-C(14)  | 1.380(3) |
| C(13)-H(13A) | 0.9500   |
| C(14)-C(15)  | 1.393(3) |
| C(14)-H(14A) | 0.9500   |
| C(15)-C(16)  | 1.447(3) |
| C(17)-C(18)  | 1.452(3) |
| C(18)-C(19)  | 1.391(3) |
| C(18)-C(23)  | 1.393(3) |
| C(19)-C(20)  | 1.382(3) |
| C(19)-H(19A) | 0.9500   |
| C(20)-C(21)  | 1.398(4) |
| C(20)-H(20A) | 0.9500   |
| C(21)-C(22)  | 1.383(3) |
| C(21)-H(21A) | 0.9500   |
| C(22)-C(23)  | 1.393(3) |
| C(22)-H(22A) | 0.9500   |
| C(23)-C(24)  | 1.443(3) |
| C(25)-C(26)  | 1.449(3) |
| C(26)-C(27)  | 1.383(3) |
| C(26)-C(31)  | 1.393(3) |
| C(27)-C(28)  | 1.389(3) |
| C(27)-H(27A) | 0.9500   |
| C(28)-C(29)  | 1.397(3) |
| C(28)-H(28A) | 0.9500   |
| C(29)-C(30)  | 1.384(3) |
| C(29)-H(29A) | 0.9500   |

|              |          |
|--------------|----------|
| C(30)-C(31)  | 1.390(3) |
| C(30)-H(30A) | 0.9500   |
| C(31)-C(32)  | 1.449(3) |
| C(33)-C(34)  | 1.398(3) |
| C(33)-C(38)  | 1.402(3) |
| C(34)-C(35)  | 1.382(3) |
| C(34)-H(34A) | 0.9500   |
| C(35)-C(36)  | 1.379(3) |
| C(35)-H(35A) | 0.9500   |
| C(36)-C(37)  | 1.384(3) |
| C(37)-C(38)  | 1.376(3) |
| C(37)-H(37A) | 0.9500   |
| C(38)-H(38A) | 0.9500   |

|                  |            |
|------------------|------------|
| O(1)-Al(1)-N(1)  | 100.45(8)  |
| O(1)-Al(1)-N(5)  | 103.41(8)  |
| N(1)-Al(1)-N(5)  | 156.12(8)  |
| O(1)-Al(1)-N(7)  | 100.24(8)  |
| N(1)-Al(1)-N(7)  | 87.49(8)   |
| N(5)-Al(1)-N(7)  | 87.46(8)   |
| O(1)-Al(1)-N(3)  | 105.54(8)  |
| N(1)-Al(1)-N(3)  | 87.15(8)   |
| N(5)-Al(1)-N(3)  | 87.32(8)   |
| N(7)-Al(1)-N(3)  | 154.21(9)  |
| C(33)-O(1)-Al(1) | 139.85(15) |
| C(1)-N(1)-C(8)   | 106.33(17) |
| C(1)-N(1)-Al(1)  | 126.28(15) |
| C(8)-N(1)-Al(1)  | 126.16(14) |
| C(8)-N(2)-C(9)   | 121.2(2)   |
| C(16)-N(3)-C(9)  | 106.63(18) |
| C(16)-N(3)-Al(1) | 125.67(16) |
| C(9)-N(3)-Al(1)  | 125.11(15) |
| C(17)-N(4)-C(16) | 121.60(19) |
| C(24)-N(5)-C(17) | 106.31(17) |
| C(24)-N(5)-Al(1) | 125.75(15) |
| C(17)-N(5)-Al(1) | 126.44(15) |

|                   |            |
|-------------------|------------|
| C(25)-N(6)-C(24)  | 121.7(2)   |
| C(32)-N(7)-C(25)  | 105.87(18) |
| C(32)-N(7)-Al(1)  | 126.45(16) |
| C(25)-N(7)-Al(1)  | 126.75(14) |
| C(32)-N(8)-C(1)   | 121.57(19) |
| O(2)-N(9)-O(3)    | 121.8(2)   |
| O(2)-N(9)-C(36)   | 119.3(2)   |
| O(3)-N(9)-C(36)   | 119.0(2)   |
| N(8)-C(1)-N(1)    | 127.6(2)   |
| N(8)-C(1)-C(2)    | 121.88(19) |
| N(1)-C(1)-C(2)    | 110.55(19) |
| C(7)-C(2)-C(3)    | 121.8(2)   |
| C(7)-C(2)-C(1)    | 106.79(19) |
| C(3)-C(2)-C(1)    | 131.4(2)   |
| C(4)-C(3)-C(2)    | 116.8(2)   |
| C(4)-C(3)-H(3A)   | 121.6      |
| C(2)-C(3)-H(3A)   | 121.6      |
| C(3)-C(4)-C(5)    | 121.6(2)   |
| C(3)-C(4)-H(4A)   | 119.2      |
| C(5)-C(4)-H(4A)   | 119.2      |
| C(6)-C(5)-C(4)    | 121.4(2)   |
| C(6)-C(5)-H(5A)   | 119.3      |
| C(4)-C(5)-H(5A)   | 119.3      |
| C(5)-C(6)-C(7)    | 117.2(2)   |
| C(5)-C(6)-H(6A)   | 121.4      |
| C(7)-C(6)-H(6A)   | 121.4      |
| C(2)-C(7)-C(6)    | 121.2(2)   |
| C(2)-C(7)-C(8)    | 106.4(2)   |
| C(6)-C(7)-C(8)    | 132.4(2)   |
| N(2)-C(8)-N(1)    | 127.5(2)   |
| N(2)-C(8)-C(7)    | 122.6(2)   |
| N(1)-C(8)-C(7)    | 109.88(19) |
| N(2)-C(9)-N(3)    | 127.8(2)   |
| N(2)-C(9)-C(10)   | 122.2(2)   |
| N(3)-C(9)-C(10)   | 110.03(19) |
| C(15)-C(10)-C(11) | 121.4(2)   |

|                    |            |
|--------------------|------------|
| C(15)-C(10)-C(9)   | 106.4(2)   |
| C(11)-C(10)-C(9)   | 132.2(2)   |
| C(12)-C(11)-C(10)  | 117.2(2)   |
| C(12)-C(11)-H(11A) | 121.4      |
| C(10)-C(11)-H(11A) | 121.4      |
| C(11)-C(12)-C(13)  | 121.4(2)   |
| C(11)-C(12)-H(12A) | 119.3      |
| C(13)-C(12)-H(12A) | 119.3      |
| C(14)-C(13)-C(12)  | 121.3(2)   |
| C(14)-C(13)-H(13A) | 119.4      |
| C(12)-C(13)-H(13A) | 119.4      |
| C(13)-C(14)-C(15)  | 117.5(2)   |
| C(13)-C(14)-H(14A) | 121.3      |
| C(15)-C(14)-H(14A) | 121.3      |
| C(10)-C(15)-C(14)  | 121.3(2)   |
| C(10)-C(15)-C(16)  | 107.02(19) |
| C(14)-C(15)-C(16)  | 131.6(2)   |
| N(4)-C(16)-N(3)    | 127.5(2)   |
| N(4)-C(16)-C(15)   | 122.58(19) |
| N(3)-C(16)-C(15)   | 109.9(2)   |
| N(4)-C(17)-N(5)    | 127.2(2)   |
| N(4)-C(17)-C(18)   | 122.6(2)   |
| N(5)-C(17)-C(18)   | 110.3(2)   |
| C(19)-C(18)-C(23)  | 121.0(2)   |
| C(19)-C(18)-C(17)  | 132.9(2)   |
| C(23)-C(18)-C(17)  | 106.10(19) |
| C(20)-C(19)-C(18)  | 117.1(2)   |
| C(20)-C(19)-H(19A) | 121.4      |
| C(18)-C(19)-H(19A) | 121.4      |
| C(19)-C(20)-C(21)  | 121.7(2)   |
| C(19)-C(20)-H(20A) | 119.2      |
| C(21)-C(20)-H(20A) | 119.2      |
| C(22)-C(21)-C(20)  | 121.6(2)   |
| C(22)-C(21)-H(21A) | 119.2      |
| C(20)-C(21)-H(21A) | 119.2      |
| C(21)-C(22)-C(23)  | 116.6(2)   |

|                    |            |
|--------------------|------------|
| C(21)-C(22)-H(22A) | 121.7      |
| C(23)-C(22)-H(22A) | 121.7      |
| C(22)-C(23)-C(18)  | 122.0(2)   |
| C(22)-C(23)-C(24)  | 131.0(2)   |
| C(18)-C(23)-C(24)  | 106.9(2)   |
| N(6)-C(24)-N(5)    | 127.54(19) |
| N(6)-C(24)-C(23)   | 122.0(2)   |
| N(5)-C(24)-C(23)   | 110.38(19) |
| N(6)-C(25)-N(7)    | 126.8(2)   |
| N(6)-C(25)-C(26)   | 122.4(2)   |
| N(7)-C(25)-C(26)   | 110.82(19) |
| C(27)-C(26)-C(31)  | 121.4(2)   |
| C(27)-C(26)-C(25)  | 132.4(2)   |
| C(31)-C(26)-C(25)  | 106.2(2)   |
| C(26)-C(27)-C(28)  | 117.0(2)   |
| C(26)-C(27)-H(27A) | 121.5      |
| C(28)-C(27)-H(27A) | 121.5      |
| C(27)-C(28)-C(29)  | 121.7(2)   |
| C(27)-C(28)-H(28A) | 119.2      |
| C(29)-C(28)-H(28A) | 119.2      |
| C(30)-C(29)-C(28)  | 121.2(2)   |
| C(30)-C(29)-H(29A) | 119.4      |
| C(28)-C(29)-H(29A) | 119.4      |
| C(29)-C(30)-C(31)  | 117.0(2)   |
| C(29)-C(30)-H(30A) | 121.5      |
| C(31)-C(30)-H(30A) | 121.5      |
| C(30)-C(31)-C(26)  | 121.7(2)   |
| C(30)-C(31)-C(32)  | 131.7(2)   |
| C(26)-C(31)-C(32)  | 106.56(19) |
| N(8)-C(32)-N(7)    | 127.2(2)   |
| N(8)-C(32)-C(31)   | 122.21(19) |
| N(7)-C(32)-C(31)   | 110.6(2)   |
| O(1)-C(33)-C(34)   | 122.4(2)   |
| O(1)-C(33)-C(38)   | 119.2(2)   |
| C(34)-C(33)-C(38)  | 118.4(2)   |
| C(35)-C(34)-C(33)  | 120.6(2)   |



|                    |          |
|--------------------|----------|
| C(35)-C(34)-H(34A) | 119.7    |
| C(33)-C(34)-H(34A) | 119.7    |
| C(36)-C(35)-C(34)  | 119.4(2) |
| C(36)-C(35)-H(35A) | 120.3    |
| C(34)-C(35)-H(35A) | 120.3    |
| C(35)-C(36)-C(37)  | 121.5(2) |
| C(35)-C(36)-N(9)   | 118.8(2) |
| C(37)-C(36)-N(9)   | 119.6(2) |
| C(38)-C(37)-C(36)  | 119.0(2) |
| C(38)-C(37)-H(37A) | 120.5    |
| C(36)-C(37)-H(37A) | 120.5    |
| C(37)-C(38)-C(33)  | 121.1(2) |
| C(37)-C(38)-H(38A) | 119.4    |
| C(33)-C(38)-H(38A) | 119.4    |

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Symmetry transformations used to generate equivalent atoms:

**Table S10.** Anisotropic displacement parameters ( $\text{\AA}^2 \times 10^3$ ) for NO<sub>2</sub>PhO-AlPc. The anisotropic

displacement factor exponent takes the form:  $-2\pi^2 [h^2 a^{*2} U^{11} + \dots + 2 h k a^* b^* U^{12}]$

|       | U <sup>11</sup> | U <sup>22</sup> | U <sup>33</sup> | U <sup>23</sup> | U <sup>13</sup> | U <sup>12</sup> |
|-------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Al(1) | 14(1)           | 17(1)           | 18(1)           | 0(1)            | 2(1)            | -1(1)           |
| O(1)  | 17(1)           | 23(1)           | 24(1)           | -5(1)           | -1(1)           | 0(1)            |
| O(2)  | 22(1)           | 68(2)           | 53(1)           | -20(1)          | -3(1)           | 0(1)            |
| O(3)  | 39(1)           | 69(2)           | 39(1)           | -29(1)          | -2(1)           | 0(1)            |
| N(1)  | 15(1)           | 18(1)           | 18(1)           | -1(1)           | 3(1)            | -1(1)           |
| N(2)  | 18(1)           | 20(1)           | 19(1)           | 2(1)            | 2(1)            | -2(1)           |
| N(3)  | 15(1)           | 17(1)           | 18(1)           | 0(1)            | 1(1)            | 0(1)            |
| N(4)  | 17(1)           | 18(1)           | 20(1)           | -2(1)           | 1(1)            | 0(1)            |
| N(5)  | 16(1)           | 17(1)           | 18(1)           | 0(1)            | 2(1)            | 0(1)            |
| N(6)  | 22(1)           | 21(1)           | 18(1)           | 2(1)            | 3(1)            | -1(1)           |
| N(7)  | 17(1)           | 16(1)           | 18(1)           | 1(1)            | 1(1)            | -2(1)           |
| N(8)  | 17(1)           | 18(1)           | 18(1)           | -1(1)           | 2(1)            | -1(1)           |
| N(9)  | 28(1)           | 35(1)           | 29(1)           | -4(1)           | -2(1)           | 2(1)            |
| C(1)  | 16(1)           | 15(1)           | 17(1)           | -5(1)           | 1(1)            | -3(1)           |
| C(2)  | 20(1)           | 16(1)           | 16(1)           | -2(1)           | 0(1)            | -2(1)           |
| C(3)  | 18(1)           | 20(1)           | 23(1)           | -2(1)           | -2(1)           | -2(1)           |
| C(4)  | 24(1)           | 19(1)           | 25(1)           | 0(1)            | -7(1)           | 1(1)            |
| C(5)  | 31(1)           | 16(1)           | 22(1)           | 3(1)            | -3(1)           | -4(1)           |
| C(6)  | 27(1)           | 19(1)           | 22(1)           | -2(1)           | 2(1)            | -4(1)           |
| C(7)  | 17(1)           | 18(1)           | 19(1)           | -3(1)           | -1(1)           | -3(1)           |
| C(8)  | 19(1)           | 17(1)           | 18(1)           | -2(1)           | 2(1)            | -3(1)           |
| C(9)  | 20(1)           | 18(1)           | 18(1)           | -1(1)           | 4(1)            | -4(1)           |
| C(10) | 19(1)           | 18(1)           | 21(1)           | -5(1)           | 4(1)            | -2(1)           |
| C(11) | 22(1)           | 24(1)           | 22(1)           | -3(1)           | 6(1)            | -4(1)           |
| C(12) | 26(1)           | 28(1)           | 25(1)           | -2(1)           | 11(1)           | -7(1)           |
| C(13) | 17(1)           | 26(1)           | 32(2)           | -7(1)           | 6(1)            | -3(1)           |
| C(14) | 19(1)           | 23(1)           | 21(1)           | -6(1)           | 4(1)            | -1(1)           |
| C(15) | 19(1)           | 17(1)           | 21(1)           | -7(1)           | 3(1)            | -3(1)           |
| C(16) | 16(1)           | 17(1)           | 19(1)           | -4(1)           | 3(1)            | 0(1)            |
| C(17) | 17(1)           | 17(1)           | 18(1)           | -4(1)           | 0(1)            | -2(1)           |

|       |       |       |       |        |       |       |
|-------|-------|-------|-------|--------|-------|-------|
| C(18) | 22(1) | 15(1) | 22(1) | -2(1)  | -2(1) | -1(1) |
| C(19) | 21(1) | 20(1) | 25(1) | -2(1)  | -1(1) | 1(1)  |
| C(20) | 26(1) | 22(1) | 28(2) | -2(1)  | -8(1) | 7(1)  |
| C(21) | 39(2) | 22(1) | 24(2) | 4(1)   | -4(1) | 5(1)  |
| C(22) | 30(1) | 23(1) | 22(1) | 2(1)   | 2(1)  | 1(1)  |
| C(23) | 22(1) | 18(1) | 21(1) | -1(1)  | -1(1) | 1(1)  |
| C(24) | 22(1) | 14(1) | 17(1) | 0(1)   | 1(1)  | -1(1) |
| C(25) | 21(1) | 18(1) | 14(1) | -2(1)  | 3(1)  | -4(1) |
| C(26) | 19(1) | 23(1) | 17(1) | -3(1)  | 3(1)  | -5(1) |
| C(27) | 26(1) | 29(2) | 19(1) | 1(1)   | 5(1)  | -4(1) |
| C(28) | 29(1) | 35(2) | 20(1) | -5(1)  | 10(1) | -6(1) |
| C(29) | 19(1) | 37(2) | 23(1) | -7(1)  | 9(1)  | -4(1) |
| C(30) | 21(1) | 27(1) | 18(1) | -6(1)  | 3(1)  | -3(1) |
| C(31) | 19(1) | 23(1) | 18(1) | -4(1)  | 4(1)  | -4(1) |
| C(32) | 15(1) | 18(1) | 20(1) | -5(1)  | 3(1)  | -2(1) |
| C(33) | 21(1) | 15(1) | 21(1) | 2(1)   | 4(1)  | -3(1) |
| C(34) | 26(1) | 26(1) | 28(2) | -10(1) | 6(1)  | -2(1) |
| C(35) | 18(1) | 29(1) | 29(2) | -2(1)  | 5(1)  | -1(1) |
| C(36) | 21(1) | 24(1) | 19(1) | 2(1)   | -1(1) | -1(1) |
| C(37) | 27(1) | 25(1) | 19(1) | -2(1)  | 3(1)  | 2(1)  |
| C(38) | 18(1) | 23(1) | 25(1) | -2(1)  | 6(1)  | -1(1) |

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**Table S11.** Hydrogen coordinates (  $\times 10^4$ ) and isotropic displacement parameters ( $\text{\AA}^2 \times 10^{-3}$ ) for NO<sub>2</sub>PhO-AlPc.

|        | x     | y    | z     | U(eq) |
|--------|-------|------|-------|-------|
| H(3A)  | 896   | 6962 | -768  | 25    |
| H(4A)  | 708   | 7612 | -2430 | 29    |
| H(5A)  | 2164  | 7783 | -3424 | 29    |
| H(6A)  | 3871  | 7325 | -2765 | 27    |
| H(11A) | 7158  | 6749 | -2206 | 27    |
| H(12A) | 9012  | 6597 | -2261 | 30    |
| H(13A) | 10038 | 5864 | -1019 | 30    |
| H(14A) | 9252  | 5274 | 340   | 25    |
| H(19A) | 8709  | 4140 | 3191  | 27    |
| H(20A) | 8838  | 3485 | 4846  | 32    |
| H(21A) | 7367  | 3347 | 5820  | 35    |
| H(22A) | 5698  | 3856 | 5169  | 30    |
| H(27A) | 2449  | 4370 | 4544  | 30    |
| H(28A) | 587   | 4516 | 4586  | 33    |
| H(29A) | -442  | 5244 | 3345  | 31    |
| H(30A) | 353   | 5850 | 2004  | 26    |
| H(34A) | 7342  | 6257 | 2331  | 31    |
| H(35A) | 8776  | 6684 | 3656  | 31    |
| H(37A) | 6626  | 7464 | 5519  | 28    |
| H(38A) | 5193  | 7045 | 4193  | 26    |

**Table S12.** Torsion angles [°] for NO<sub>2</sub>PhO-AlPc.

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|                       |             |
|-----------------------|-------------|
| N(1)-Al(1)-O(1)-C(33) | -146.3(2)   |
| N(5)-Al(1)-O(1)-C(33) | 34.6(2)     |
| N(7)-Al(1)-O(1)-C(33) | 124.4(2)    |
| N(3)-Al(1)-O(1)-C(33) | -56.4(2)    |
| C(32)-N(8)-C(1)-N(1)  | -0.3(3)     |
| C(32)-N(8)-C(1)-C(2)  | 180.0(2)    |
| C(8)-N(1)-C(1)-N(8)   | 178.6(2)    |
| Al(1)-N(1)-C(1)-N(8)  | -13.5(3)    |
| C(8)-N(1)-C(1)-C(2)   | -1.6(2)     |
| Al(1)-N(1)-C(1)-C(2)  | 166.27(15)  |
| N(8)-C(1)-C(2)-C(7)   | -178.9(2)   |
| N(1)-C(1)-C(2)-C(7)   | 1.3(2)      |
| N(8)-C(1)-C(2)-C(3)   | 0.8(4)      |
| N(1)-C(1)-C(2)-C(3)   | -178.9(2)   |
| C(7)-C(2)-C(3)-C(4)   | 2.0(3)      |
| C(1)-C(2)-C(3)-C(4)   | -177.8(2)   |
| C(2)-C(3)-C(4)-C(5)   | -0.9(3)     |
| C(3)-C(4)-C(5)-C(6)   | -0.7(4)     |
| C(4)-C(5)-C(6)-C(7)   | 1.4(3)      |
| C(3)-C(2)-C(7)-C(6)   | -1.3(3)     |
| C(1)-C(2)-C(7)-C(6)   | 178.5(2)    |
| C(3)-C(2)-C(7)-C(8)   | 179.8(2)    |
| C(1)-C(2)-C(7)-C(8)   | -0.4(2)     |
| C(5)-C(6)-C(7)-C(2)   | -0.4(3)     |
| C(5)-C(6)-C(7)-C(8)   | 178.2(2)    |
| C(9)-N(2)-C(8)-N(1)   | 1.7(4)      |
| C(9)-N(2)-C(8)-C(7)   | -178.3(2)   |
| C(1)-N(1)-C(8)-N(2)   | -178.7(2)   |
| Al(1)-N(1)-C(8)-N(2)  | 13.4(3)     |
| C(1)-N(1)-C(8)-C(7)   | 1.3(2)      |
| Al(1)-N(1)-C(8)-C(7)  | -166.58(15) |
| C(2)-C(7)-C(8)-N(2)   | 179.5(2)    |
| C(6)-C(7)-C(8)-N(2)   | 0.8(4)      |
| C(2)-C(7)-C(8)-N(1)   | -0.6(3)     |

|                         |             |
|-------------------------|-------------|
| C(6)-C(7)-C(8)-N(1)     | -179.3(2)   |
| C(8)-N(2)-C(9)-N(3)     | 1.0(4)      |
| C(8)-N(2)-C(9)-C(10)    | -178.3(2)   |
| C(16)-N(3)-C(9)-N(2)    | 179.2(2)    |
| Al(1)-N(3)-C(9)-N(2)    | -18.3(3)    |
| C(16)-N(3)-C(9)-C(10)   | -1.5(2)     |
| Al(1)-N(3)-C(9)-C(10)   | 161.05(15)  |
| N(2)-C(9)-C(10)-C(15)   | -179.2(2)   |
| N(3)-C(9)-C(10)-C(15)   | 1.4(3)      |
| N(2)-C(9)-C(10)-C(11)   | 4.1(4)      |
| N(3)-C(9)-C(10)-C(11)   | -175.3(2)   |
| C(15)-C(10)-C(11)-C(12) | -0.4(3)     |
| C(9)-C(10)-C(11)-C(12)  | 176.0(2)    |
| C(10)-C(11)-C(12)-C(13) | 1.0(3)      |
| C(11)-C(12)-C(13)-C(14) | -0.6(4)     |
| C(12)-C(13)-C(14)-C(15) | -0.5(3)     |
| C(11)-C(10)-C(15)-C(14) | -0.8(3)     |
| C(9)-C(10)-C(15)-C(14)  | -177.9(2)   |
| C(11)-C(10)-C(15)-C(16) | 176.4(2)    |
| C(9)-C(10)-C(15)-C(16)  | -0.8(2)     |
| C(13)-C(14)-C(15)-C(10) | 1.2(3)      |
| C(13)-C(14)-C(15)-C(16) | -175.2(2)   |
| C(17)-N(4)-C(16)-N(3)   | -0.8(4)     |
| C(17)-N(4)-C(16)-C(15)  | 176.0(2)    |
| C(9)-N(3)-C(16)-N(4)    | 178.1(2)    |
| Al(1)-N(3)-C(16)-N(4)   | 15.7(3)     |
| C(9)-N(3)-C(16)-C(15)   | 1.0(2)      |
| Al(1)-N(3)-C(16)-C(15)  | -161.42(15) |
| C(10)-C(15)-C(16)-N(4)  | -177.4(2)   |
| C(14)-C(15)-C(16)-N(4)  | -0.7(4)     |
| C(10)-C(15)-C(16)-N(3)  | -0.1(3)     |
| C(14)-C(15)-C(16)-N(3)  | 176.6(2)    |
| C(16)-N(4)-C(17)-N(5)   | 0.0(3)      |
| C(16)-N(4)-C(17)-C(18)  | -179.5(2)   |
| C(24)-N(5)-C(17)-N(4)   | 179.0(2)    |
| Al(1)-N(5)-C(17)-N(4)   | -14.5(3)    |

|                         |             |
|-------------------------|-------------|
| C(24)-N(5)-C(17)-C(18)  | -1.5(2)     |
| Al(1)-N(5)-C(17)-C(18)  | 165.05(15)  |
| N(4)-C(17)-C(18)-C(19)  | 0.2(4)      |
| N(5)-C(17)-C(18)-C(19)  | -179.4(2)   |
| N(4)-C(17)-C(18)-C(23)  | -179.6(2)   |
| N(5)-C(17)-C(18)-C(23)  | 0.8(3)      |
| C(23)-C(18)-C(19)-C(20) | -1.1(3)     |
| C(17)-C(18)-C(19)-C(20) | 179.1(2)    |
| C(18)-C(19)-C(20)-C(21) | 0.6(3)      |
| C(19)-C(20)-C(21)-C(22) | 0.2(4)      |
| C(20)-C(21)-C(22)-C(23) | -0.6(4)     |
| C(21)-C(22)-C(23)-C(18) | 0.1(4)      |
| C(21)-C(22)-C(23)-C(24) | -179.4(2)   |
| C(19)-C(18)-C(23)-C(22) | 0.8(4)      |
| C(17)-C(18)-C(23)-C(22) | -179.4(2)   |
| C(19)-C(18)-C(23)-C(24) | -179.7(2)   |
| C(17)-C(18)-C(23)-C(24) | 0.2(2)      |
| C(25)-N(6)-C(24)-N(5)   | -0.6(4)     |
| C(25)-N(6)-C(24)-C(23)  | -178.4(2)   |
| C(17)-N(5)-C(24)-N(6)   | -176.4(2)   |
| Al(1)-N(5)-C(24)-N(6)   | 16.9(3)     |
| C(17)-N(5)-C(24)-C(23)  | 1.6(2)      |
| Al(1)-N(5)-C(24)-C(23)  | -165.06(15) |
| C(22)-C(23)-C(24)-N(6)  | -3.5(4)     |
| C(18)-C(23)-C(24)-N(6)  | 177.0(2)    |
| C(22)-C(23)-C(24)-N(5)  | 178.4(2)    |
| C(18)-C(23)-C(24)-N(5)  | -1.1(3)     |
| C(24)-N(6)-C(25)-N(7)   | -3.2(4)     |
| C(24)-N(6)-C(25)-C(26)  | 177.2(2)    |
| C(32)-N(7)-C(25)-N(6)   | -179.3(2)   |
| Al(1)-N(7)-C(25)-N(6)   | -9.8(3)     |
| C(32)-N(7)-C(25)-C(26)  | 0.4(2)      |
| Al(1)-N(7)-C(25)-C(26)  | 169.82(15)  |
| N(6)-C(25)-C(26)-C(27)  | -3.1(4)     |
| N(7)-C(25)-C(26)-C(27)  | 177.3(2)    |
| N(6)-C(25)-C(26)-C(31)  | 178.3(2)    |

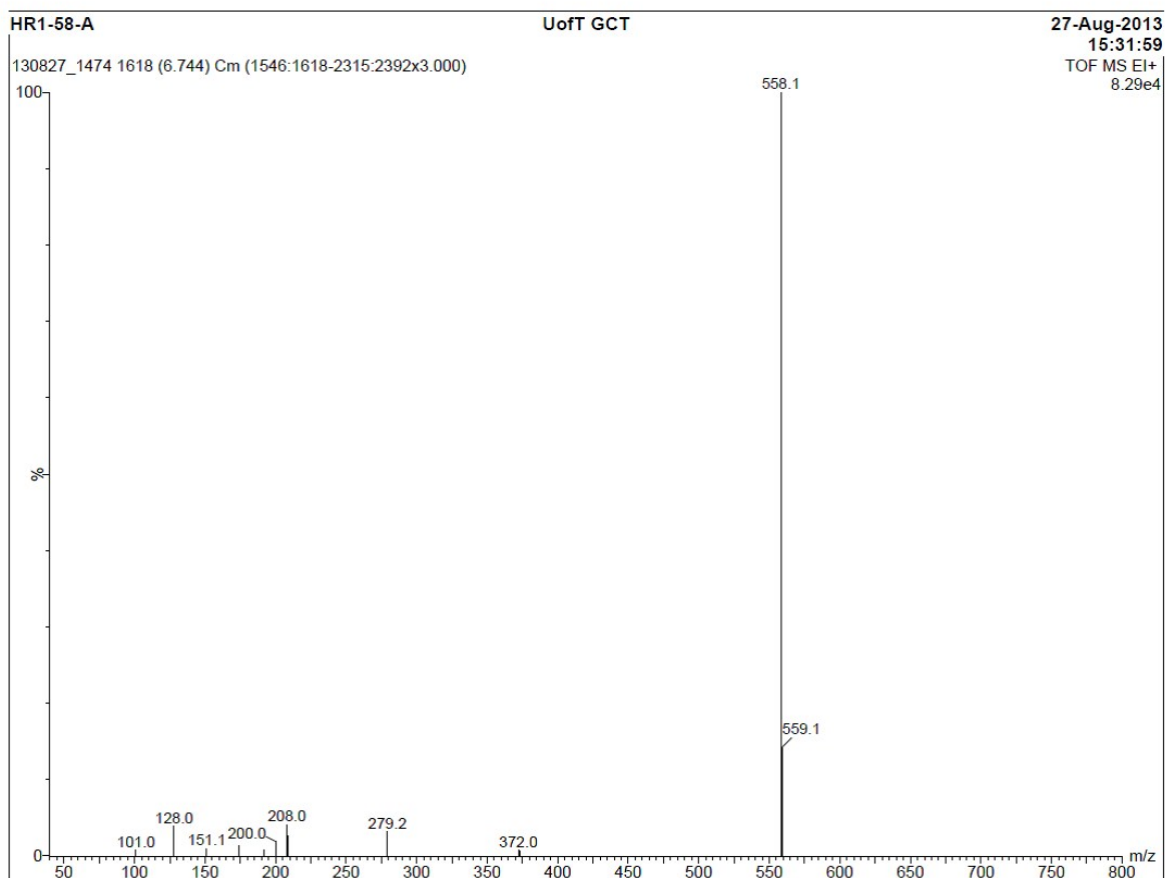
|                         |             |
|-------------------------|-------------|
| N(7)-C(25)-C(26)-C(31)  | -1.4(3)     |
| C(31)-C(26)-C(27)-C(28) | 0.0(3)      |
| C(25)-C(26)-C(27)-C(28) | -178.4(2)   |
| C(26)-C(27)-C(28)-C(29) | -1.2(4)     |
| C(27)-C(28)-C(29)-C(30) | 0.4(4)      |
| C(28)-C(29)-C(30)-C(31) | 1.6(4)      |
| C(29)-C(30)-C(31)-C(26) | -2.8(3)     |
| C(29)-C(30)-C(31)-C(32) | 176.1(2)    |
| C(27)-C(26)-C(31)-C(30) | 2.0(4)      |
| C(25)-C(26)-C(31)-C(30) | -179.2(2)   |
| C(27)-C(26)-C(31)-C(32) | -177.1(2)   |
| C(25)-C(26)-C(31)-C(32) | 1.7(2)      |
| C(1)-N(8)-C(32)-N(7)    | 0.9(3)      |
| C(1)-N(8)-C(32)-C(31)   | -177.8(2)   |
| C(25)-N(7)-C(32)-N(8)   | -178.0(2)   |
| Al(1)-N(7)-C(32)-N(8)   | 12.5(3)     |
| C(25)-N(7)-C(32)-C(31)  | 0.8(2)      |
| Al(1)-N(7)-C(32)-C(31)  | -168.74(15) |
| C(30)-C(31)-C(32)-N(8)  | -1.7(4)     |
| C(26)-C(31)-C(32)-N(8)  | 177.2(2)    |
| C(30)-C(31)-C(32)-N(7)  | 179.4(2)    |
| C(26)-C(31)-C(32)-N(7)  | -1.6(3)     |
| Al(1)-O(1)-C(33)-C(34)  | 33.7(4)     |
| Al(1)-O(1)-C(33)-C(38)  | -148.4(2)   |
| O(1)-C(33)-C(34)-C(35)  | 177.7(2)    |
| C(38)-C(33)-C(34)-C(35) | -0.1(4)     |
| C(33)-C(34)-C(35)-C(36) | 0.2(4)      |
| C(34)-C(35)-C(36)-C(37) | -0.1(4)     |
| C(34)-C(35)-C(36)-N(9)  | -177.1(2)   |
| O(2)-N(9)-C(36)-C(35)   | -1.8(4)     |
| O(3)-N(9)-C(36)-C(35)   | 177.1(2)    |
| O(2)-N(9)-C(36)-C(37)   | -178.8(2)   |
| O(3)-N(9)-C(36)-C(37)   | 0.1(4)      |
| C(35)-C(36)-C(37)-C(38) | -0.1(4)     |
| N(9)-C(36)-C(37)-C(38)  | 176.9(2)    |
| C(36)-C(37)-C(38)-C(33) | 0.2(4)      |



|                         |           |
|-------------------------|-----------|
| O(1)-C(33)-C(38)-C(37)  | -178.0(2) |
| C(34)-C(33)-C(38)-C(37) | -0.1(4)   |

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Symmetry transformations used to generate equivalent atoms:



**Figure S7.** Mass spectrum (TOF-EI) of F-AlPc produced from the decomposition of F<sub>5</sub>PhO-AlPc.