

## Supplementary data

As mentioned in Footnote 1, crystallographic data for the previously unreported [(PMe<sub>2</sub>Ph)<sub>2</sub>PtS<sub>2</sub>B<sub>16</sub>H<sub>16</sub>] species **2** are deposited at the Cambridge Crystallographic Data Centre, CCDC, deposition number CCDC 254726; these data can be obtained free of charge at [www.ccdc.cam.ac.uk/conts/retrieving.html](http://www.ccdc.cam.ac.uk/conts/retrieving.html) [or from the Cambridge Crystallographic Data Centre, 12, Union Road, Cambridge CB2 1EZ, UK; fax: (internat.) +44-1223/336-033; e-mail: [deposit@ccdc.cam.ac.uk](mailto:deposit@ccdc.cam.ac.uk)]. The DFT-calculated coordinates for the [B<sub>10</sub>H<sub>15</sub>]<sup>-</sup> dianion **5** are appended as supplementary data to this submission.

### Supplementary data. Calculated coordinates (DFT; B3LYP / 6-31G\* ) for the [B<sub>10</sub>H<sub>15</sub>]<sup>-</sup> dianion **5**

B -1.6083810695 -0.3385663682 -1.3185996534  
B -0.703578827 1.3172641384 -0.9578495235  
B 1.9033975993 -0.5537348746 -0.7150445626  
B 1.3413294492 0.1643192398 0.8273075893  
B 1.1326217096 1.2042816001 -0.6426173218  
B 0.7116787391 -1.4629391952 0.6763549665  
B -0.0362167428 1.2632087651 0.6614821383  
B -0.2734763744 -0.2755989794 1.4929078993  
B -1.5106100918 0.3391057035 0.3372032777  
B -1.0640334799 -1.3540568944 0.3708954003  
H -2.569373177 0.6671635214 0.7853370875  
H 1.365578906 0.3762987013 -1.5908094808  
H 1.4887740396 -1.4045034741 -1.4668446592  
H -1.8047008938 -2.2563072289 0.6216959018  
H -0.067497011 -1.8998926755 -0.2830756364  
H -1.0699932705 -1.2466124574 -1.9072508074  
H -1.2317326311 2.3285497443 -1.3181607958  
H -2.7284562888 -0.1659944778 -1.7153714664  
H 1.866884922 2.137815981 -0.7869886343

H 1.2143595048 -2.4411330322 1.1411034969

H -0.0718132938 2.3071432202 1.2417921536

H -0.7051218078 0.5044359541 -1.9468597069

H 3.1037007506 -0.5212508332 -0.7138018335

H -0.47595766 -0.2759134663 2.6703772712

H 2.221693352 0.373784847 1.6086560587