Table S1. Powder X-ray diffraction data (*d* in Å) for finescreekite. Only calculated lines with *I* > 2.5 are listed.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *I*obs | *d*obs | *d*calc | *I*calc | *hkl* |  | *I*obs | *d*obs | *d*calc | *I*calc | *hkl* |  | *I*obs | *d*obs | *d*calc | *I*calc | *hkl* |
| 4 | 7.37 | 7.4128 | 5 | 002 |  |  |  | 2.3412 | 3 | 313 |  | 12 | 1.7376 | 1.7449 | 4 | 160 |
|  |  | 7.1976 | 3 | 101 |  | 25 | 2.319 | 2.3198 | 22 | 322 |  | 1.7370 | 5 | 326 |
| 3 | 6.67 | 6.5279 | 5 | 110 |  | 2.3109 | 13 | 116 |  | 1.7329 | 4 | 161 |
| 78 | 6.00 | 6.0957 | 36 | 012 |  |  |  | 2.2812 | 8 | 035 |  | 26 | 1.6926 | 1.7057 | 4 | 424 |
| 5.9744 | 82 | 111 |  | 13 | 2.247 | 2.2449 | 25 | 240 |  | 1.6992 | 4 | 155 |
|  |  | 5.5089 | 6 | 102 |  | 16 | 2.227 | 2.2196 | 12 | 241 |  | 1.6908 | 13 | 405 |
| 21 | 5.35 | 5.3564 | 25 | 020 |  | 23 | 2.190 | 2.2056 | 6 | 304 |  | 1.6888 | 5 | 350 |
| 21 | 4.97 | 5.0377 | 19 | 021 |  | 2.1984 | 4 | 135 |  | 1.6774 | 5 | 433 |
| 4.8991 | 18 | 112 |  | 2.1947 | 8 | 225 |  | 18 | 1.6655 | 1.6701 | 6 | 415 |
| 6 | 4.46 | 4.4898 | 14 | 120 |  | 2.1896 | 10 | 323 |  | 1.6692 | 11 | 218 |
| 28 | 4.33 | 4.3416 | 28 | 022 |  | 2.1810 | 10 | 234 |  | 1.6613 | 7 | 047 |
| 4.2971 | 18 | 121 |  | 10 | 2.162 | 2.1648 | 7 | 126 |  | 1.6565 | 5 | 317 |
|  |  | 4.1165 | 3 | 200 |  | 2.1602 | 3 | 314 |  | 18 | 1.6337 | 1.6454 | 3 | 163 |
|  |  | 3.9401 | 11 | 113 |  | 2.1529 | 4 | 331 |  | 1.6380 | 4 | 260 |
| 48 | 3.846 | 3.8426 | 58 | 210 |  | 4 | 2.086 | 2.0990 | 3 | 144 |  | 1.6365 | 3 | 501 |
| 62 | 3.701 | 3.7197 | 62 | 211 |  | 2.0783 | 10 | 216 |  | 1.6275 | 9 | 510 |
| 3.7064 | 90 | 004 |  | 43 | 2.045 | 2.0583 | 7 | 052 |  | 47 | 1.6042 | 1.6153 | 8 | 109 |
| 3.6321 | 31 | 023 |  | 2.0535 | 6 | 151 |  | 1.6124 | 3 | 425 |
|  |  | 3.5027 | 10 | 014 |  | 2.0439 | 9 | 243 |  | 1.6116 | 4 | 228 |
| 85 | 3.436 | 3.4716 | 42 | 031 |  | 2.0387 | 26 | 401 |  | 1.6086 | 4 | 064 |
| 3.4115 | 100 | 212 |  | 16 | 1.9943 | 2.0028 | 5 | 411 |  | 1.6069 | 16 | 434 |
|  |  | 3.3797 | 3 | 104 |  | 1.9968 | 4 | 152 |  | 1.6001 | 9 | 255 |
| 37 | 3.347 | 3.3231 | 43 | 123 |  | 1.9953 | 10 | 235 |  | 20 | 1.5872 | 1.5972 | 3 | 119 |
|  |  | 3.2761 | 5 | 130 |  | 1.9875 | 6 | 045 |  | 1.5938 | 18 | 442 |
|  |  | 3.2231 | 3 | 114 |  | 19 | 1.9737 | 1.9794 | 15 | 315 |  | 1.5883 | 3 | 156 |
| 46 | 3.207 | 3.2171 | 25 | 032 |  | 1.9727 | 7 | 136 |  | 1.5787 | 6 | 164 |
| 3.1876 | 34 | 221 |  | 1.9701 | 19 | 226 |  | 8 | 1.5505 | 1.5548 | 3 | 263 |
|  |  | 3.0479 | 8 | 024 |  |  |  | 1.9320 | 3 | 145 |  | 12 | 1.5280 | 1.5368 | 6 | 354 |
| 100 | 3.007 | 3.0335 | 50 | 213 |  | 30 | 1.9140 | 1.9202 | 13 | 244 |  | 1.5358 | 3 | 308 |
| 2.9965 | 50 | 132 |  | 1.9155 | 8 | 127 |  | 1.5167 | 3 | 426 |
| 2.9872 | 34 | 222 |  | 1.9120 | 3 | 153 |  | 29 | 1.4970 | 1.5065 | 3 | 256 |
| 22 | 2.891 | 2.8944 | 40 | 033 |  | 1.9054 | 3 | 421 |  | 1.4988 | 12 | 072 |
| 2.8583 | 14 | 124 |  | 30 | 1.8840 | 1.9000 | 14 | 403 |  | 1.4982 | 3 | 264 |
|  |  | 2.7897 | 16 | 105 |  | 1.8851 | 20 | 251 |  | 1.4902 | 4 | 514 |
|  |  | 2.7306 | 9 | 133 |  | 1.8765 | 3 | 334 |  | 1.4890 | 3 | 361 |
| 43 | 2.702 | 2.7235 | 18 | 223 |  | 25 | 1.8525 | 1.8598 | 10 | 422 |  | 1.4877 | 5 | 531 |
| 2.6997 | 31 | 115 |  | 1.8557 | 8 | 342 |  | 10 | 1.4712 | 1.4717 | 3 | 139 |
|  |  | 2.6974 | 7 | 230 |  | 1.8549 | 6 | 217 |  | 1.4686 | 3 | 0·1·10 |
| 82 | 2.644 | 2.6677 | 56 | 214 |  | 1.8532 | 4 | 008 |  |  |  | 1.4457 | 4 | 1·1·10 |
| 2.6539 | 25 | 231 |  | 1.8410 | 8 | 252 |  | 15 | 1.4279 | 1.4312 | 4 | 533 |
| 2.6355 | 30 | 041 |  | 6 | 1.8127 | 1.8216 | 9 | 037 |  | 1.4288 | 3 | 0·2·10 |
| 2.6168 | 25 | 311 |  | 1.8096 | 3 | 154 |  | 1.4230 | 3 | 427 |
|  |  | 2.5716 | 5 | 034 |  |  |  | 1.7907 | 3 | 423 |  | 1.4212 | 6 | 347 |
| 11 | 2.542 | 2.5348 | 13 | 232 |  | 43 | 1.7796 | 1.7898 | 6 | 245 |  | 5 | 1.3942 | 1.4109 | 3 | 338 |
|  |  | 2.4742 | 6 | 125 |  | 1.7855 | 4 | 060 |  | 1.4059 | 3 | 239 |
| 14 | 2.423 | 2.4495 | 6 | 224 |  | 1.7832 | 12 | 430 |  | 15 | 1.3558 | 1.3618 | 6 | 446 |
| 2.4099 | 14 | 321 |  | 1.7786 | 6 | 137 |  | 1.3553 | 3 | 611 |
| 2.4077 | 6 | 016 |  | 1.7767 | 11 | 227 |  | 1.3498 | 3 | 2·2·10 |
|  |  | 2.3992 | 3 | 303 |  | 1.7734 | 14 | 146 |  |  |  |  |  |  |
| 28 | 2.363 | 2.3677 | 10 | 233 |  | 1.7705 | 3 | 431 |  |  |  |  |  |  |
| 2.3546 | 22 | 043 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.3475 | 11 | 215 |  |  |  |  |  |  |  |  |  |  |  |  |