**Table s1.** The resulting atomic ratio (1) between carbon and tungsten from different APT measurements.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pulse energy (nJ)** | **A** | **D** | **Pulse repetition rate (kHz)** | **A** | **D** | **Base temperature**  **(K)** | **A** | **D** |
| **0.3** | 0.93 | 0.92 | **100** | 0.95 | 0.94 | **20** | 0.92 | 0.91 |
| **0.4** | 0.95 | 0.93 | **200** | 0.95 | 0.93 | **40** | 0.92 | 0.92 |
| **0.6** | 0.95 | 0.95 | **250** | 0.94 | 0.93 | **60** | 0.95 | 0.92 |
| **0.8** | 0.95 | 0.95 | **333** | 0.95 | 0.94 | **80** | 0.94 | 0.92 |
| **1.0** | 0.95 | 0.96 | **500** | 0.97 | 0.94 |  |  |  |
|  |  |  | **1000** | 0.84 | 0.89 |  |  |  |