

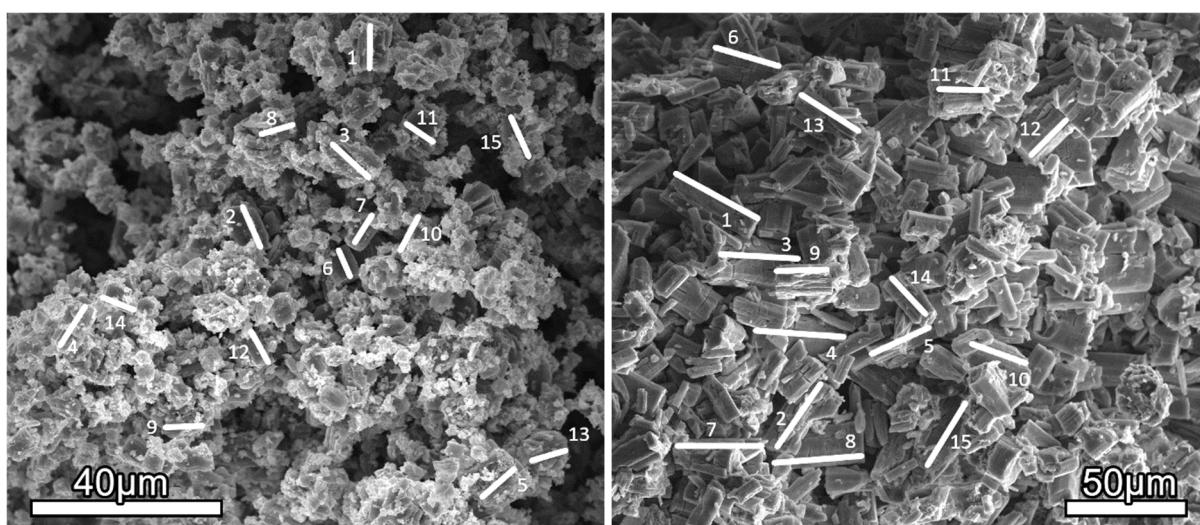
# Influence of Solid Fraction on Particle Size during Wet-Chemical Synthesis of $\beta$ -Li<sub>3</sub>PS<sub>4</sub> in Tetrahydrofuran – Supplementary Information

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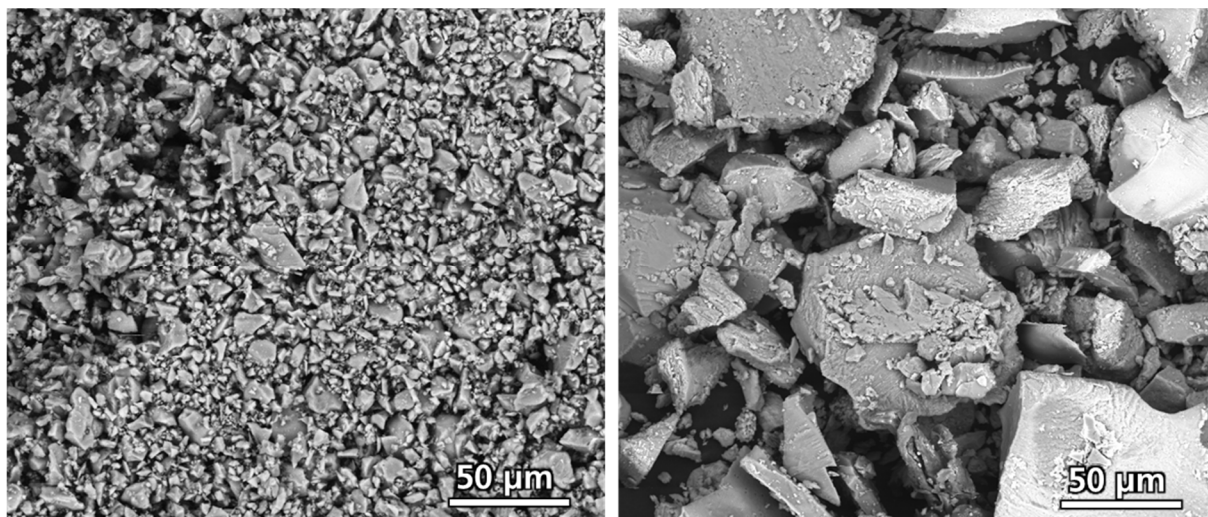
## 1. Supporting Information



*Figure S1: Measurement of particle sizes in sample-200 (left) and sample-100 (right).*

|         | Sample-<br>200 | Sample-<br>100 | Sample-<br>50 |
|---------|----------------|----------------|---------------|
| Label   | Length         | Length         | Length        |
| 1       | 9.4            | 39.7           | 48.5          |
| 2       | 9.8            | 33.6           | 47.9          |
| 3       | 9.6            | 28.5           | 61.0          |
| 4       | 10.4           | 38.4           | 54.5          |
| 5       | 9.1            | 33.6           | 61.1          |
| 6       | 7.0            | 29.3           | 53.3          |
| 7       | 6.4            | 36.1           | 73.1          |
| 8       | 7.3            | 34.7           | 47.7          |
| 9       | 8.8            | 24.1           | 55.9          |
| 10      | 9.4            | 28.1           | 61.4          |
| 11      | 7.7            | 24.3           | 70.9          |
| 12      | 8.2            | 22.3           | 35.1          |
| 13      | 8.5            | 29.6           | 42.3          |
| 14      | 7.4            | 22.2           | 60.1          |
| 15      | 10.2           | 30.4           | 62.1          |
| 16      |                |                | 37.2          |
| 17      |                |                | 67.5          |
| 18      |                |                | 57.2          |
| 19      |                |                | 59.0          |
| 20      |                |                | 67.5          |
| 21      |                |                | 43.2          |
| 22      |                |                | 40.4          |
| 23      |                |                | 45.2          |
| 24      |                |                | 37.4          |
| 25      |                |                | 36.2          |
| 26      |                |                | 36.7          |
| 27      |                |                | 31.3          |
| Mean    | 9.3            | 33.4           | 64.3          |
| STD     | 0.7            | 3.7            | 4.7           |
| Maximum | 10.4           | 39.7           | 73.1          |

*Table S1: Measured particle sizes of all samples. The 10 largest particles, which are used to calculate the mean values and standard deviation (STD), are colored in green.*



*Figure S2: SEM images of lithium sulfide (left) and phosphorus pentasulfide (right).*