



## Comments on “Unveiling the recycling characteristics and trends of spent lithium-ion battery: A scientometric study” by Li, Guangming et al., DOI (<https://doi.org/10.1007/s11356-021-17,814-7>)

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Zhao et al. (2022) recently published a paper in *Environmental Science and Pollution Research* entitled “Unveiling the recycling characteristics and trends of spent lithium-ion battery: A scientometric study.” Zhao et al. stated in Data and method that “The data for analysis were collected from Science Citation Index Expanded (SCIE) of Web of Science Core Collection (WoSCC).” and “the input search term was set as: TS (Topic Search) = ((spent lithium battery OR waste lithium battery) AND (recovery OR recycling)).”

The authors used search keywords “spent lithium battery OR waste lithium battery” AND “recovery OR recycling” which means “‘spent and lithium and battery’ OR ‘waste and lithium and battery’” AND “recovery OR recycling.” A total of 1104 documents including 1016 articles (92% of 1104 documents), 83 reviews (7.5%), 25 proceedings papers (2.3%), 3 editorial materials (0.27%), and 2 meeting abstracts (0.18%) were found from 1995 to 2020. However, nine documents do not contain any search keywords in their title, abstract, or author keywords. A total of 504, 723, 932, 555, 560, and 673 documents contain waste, spent, lithium, battery, recovery, and recycling respectively.

Furthermore, 480 documents contain search keywords “waste, lithium, and battery” or “spent, lithium, and battery” and 908 documents contain search keywords “recovery or

recycling” in their title, abstract, or author keywords. Finally, only 414 documents contained search keywords “spent lithium battery OR waste lithium battery” AND “recovery OR recycling” in their title, abstract, or author keywords. Based on the methods in the manuscript, 690 searched-out documents do not contain search keywords in their title, abstract, or author keywords. These documents are irrelevant to the “spent lithium-ion battery.”

Zhao et al. used inappropriate search strategies and data to publish “Unveiling the recycling characteristics and trends of spent lithium-ion battery: A scientometric study” (Zhao et al. 2022) in *Environmental Science and Pollution Research* which might be misleading readers of the journal.

### Reference

Zhao SQ, Quan JW, Wang TY, Song DM, Huang JW, He WZ, Li GM (2022) Unveiling the recycling characteristics and trends of spent lithium-ion battery: a scientometric study. *Environ Sci Pollut Res* 29(7):9448–9461

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