Review of: "Adsorption behaviors and mechanisms of Cu2+, Zn2+ and Pb2+ by magnetically modified lignite"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

The study, heavy metal adsorption with a modifed lignite adsorbent was proposed. Hoping these comments may assist in producing more quality articles in the future.

1. Abstract should contain information regarding optimum reaction conditions such as pH, dosage etc., for a clear representation of the research reported.
2. Lack of reference citation in results and discussion part. For eg: “Because large amount of H+ in a strong acidic solution would compete with heavy metal cations for adsorption sites, leading to the low removal rates under lower pH value” this should either be proved by the researchers or given proper reference.
3. The optimization of pH should have been done in a wide range of pH. Because, in many literature, the adsorption of heavy metals were optimum at a pH beyond the range mentioned in this research. Here, the upper limit value (pH 4) was reported as the optimum pH.
4. The results are discussed with respect to percentage removal. It should be noted that, adsorption capacity is an important measure which decide the feasibility of the chosen adsorbent.
5. At acidic pH, the tendency of magnetite to leach out from the adsorbent should not be neglected. Here, continuous study with heavy metal solution at pH 4 may cause release of Iron from the composite adsorbent, which may eventually affect the capacity and thus efficiency of the process. A study of iron leaching should have carried out.
6. The conclusion may contain more qualitative insights than repeating the quantitative results discussed already. Environmental implications should be discussed with respect to the proposed adsorbent.