Interactive comment on "Biochar carrying hydrocarbon decomposers promotes degradation during the early stage of bioremediation" *by* P. Galitskaya et al.

M. Romantschuk

martin.romantschuk@helsinki.fi

The topic of the paper is important and current. The question of how to improve the effect and reliability of bioremediation is discussed in the introduction, and based on the reviewed literature new experiments are suggested. The review of the literature appears up-to-date and relevant. Some polishing of the language is, however, needed. Additionally, I would claim that in most cases, biostimulation and bioaugmentation are not alternatives. Biostimulation is the same as improving the conditions for indigenous microbes, while bioaugmentation means adding microbes, in this case bacteria. For bioaugmentation to work, the conditions for microbial activity need to be good, that is, in practice biostimulation in some form is needed anyway, and bioaugmentation is done

on top of that. That is also what Kauppi et al (2011) studied, and showed that in the tested conditions bioaugmentation was obsolete. Adding immobilized bacteria as part if the biostimulating biochar still seems like a very good idea worth testing.