

Biological Impact of Lithium Intercalating Complex Metal Oxides to Model Bacterium *B. subtilis*

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Supporting Information

Table of Contents:

- **Figure S1.** Representative powder XRD spectrum for $\text{Li}_{0.27}\text{Ni}_{0.33}\text{Mn}_{0.34}\text{Co}_{0.33}\text{O}_2$ (NMC 111) used in this study.
- **Figure S2.** Representative SEM images of the material.
- **Figure S3.** Sample mass spectra of surfactin with fragments.
- **Figure S4.** Growth curves of *B. subtilis* cultures grown in minimal medium (black), or media containing 0.413 mg/L Li^+ (brown), and 0.038 mg/L Mn^{2+} (purple). Chloride salts were used for all the ions. Error bars represent standard deviation from at least three replicates.
- **Figure S5.** Respirometry response of *B. subtilis* cultures to 5.0 mg/L NMC (brown) and a combination of 0.279 mg/L Ni^{2+} and 0.096 mg/L Co^{2+} (purple) in minimal medium. Chloride salts were used for all the ions. Error bars represent standard error of means from at least three replicates.
- **Figure S6.** Sample fluorescence microscopic image from single-cell gel electrophoresis analysis of *B. subtilis* DNA damage induced by NMC.

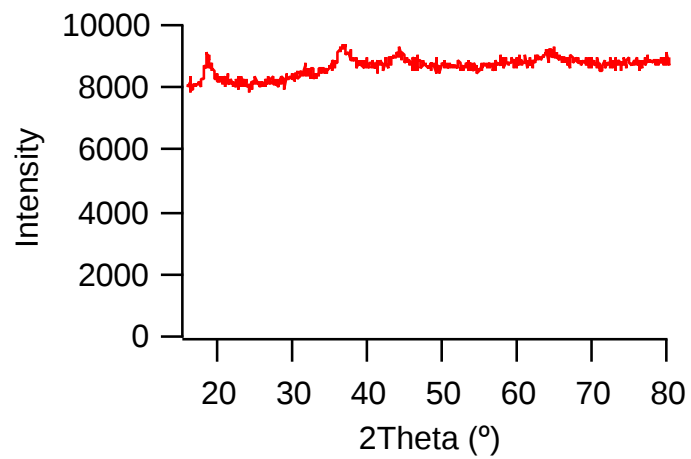


Figure S1. Representative powder X-ray diffraction spectrum for $\text{Li}_{0.27}\text{Ni}_{0.33}\text{Mn}_{0.34}\text{Co}_{0.33}\text{O}_2$ (NMC 111) used in this study.

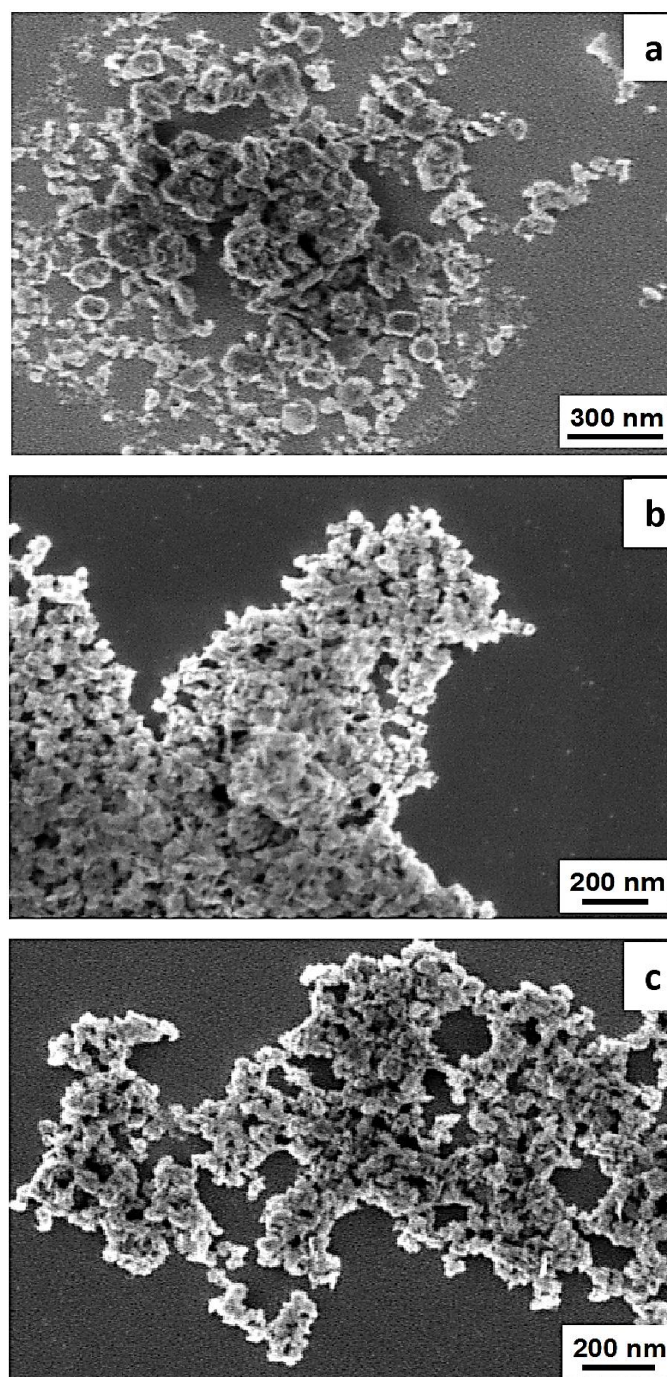


Figure S2. Representative SEM images of (a) $\text{Li}_{0.27}\text{Ni}_{0.33}\text{Mn}_{0.34}\text{Co}_{0.33}\text{O}_2$ (NMC 111), (b) $\text{Li}_{0.61}\text{Ni}_{0.23}\text{Mn}_{0.55}\text{Co}_{0.22}\text{O}_2$ (55% Mn NMC), and (c) $\text{Li}_{0.52}\text{Ni}_{0.14}\text{Mn}_{0.72}\text{Co}_{0.14}\text{O}_2$ (72% Mn NMC).

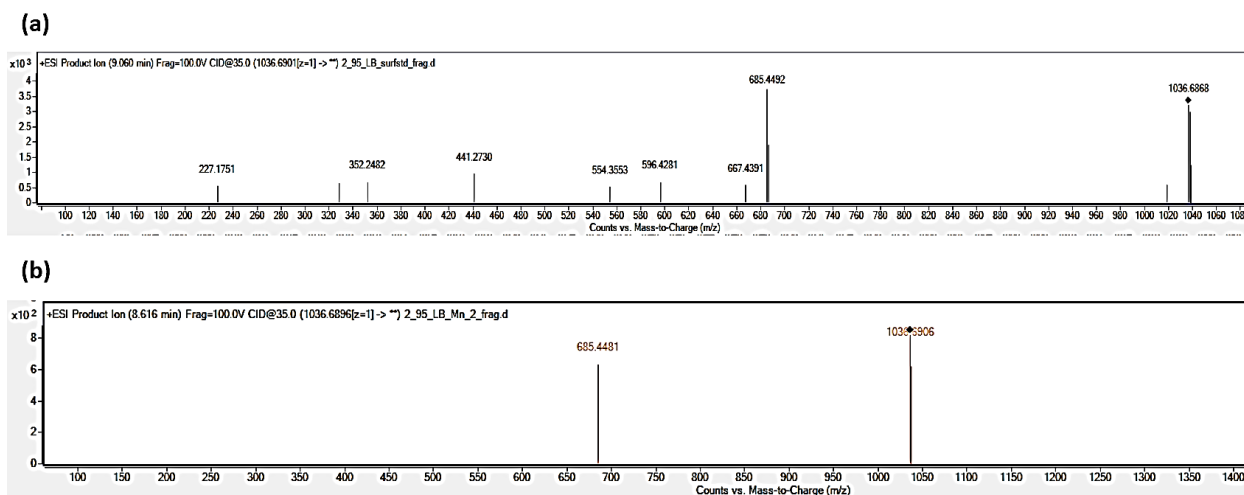


Figure S3. Sample mass spectra of (a) surfactin standard and (b) surfactin eluted from B.

subtilis culture grown in LB medium doped with 0.072 mg/L Mn^{2+} .

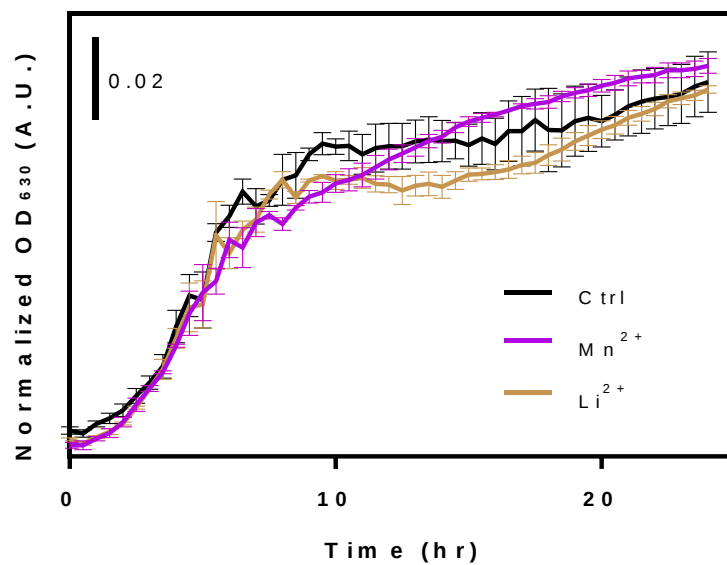


Figure S4. Growth curves of *B. subtilis* cultures grown in minimal medium (black), or media containing 0.413 mg/L Li⁺ (brown), and 0.038 mg/L Mn²⁺ (purple). Chloride salts were used for all the ions. Error bars represent standard deviation from at least three replicates.

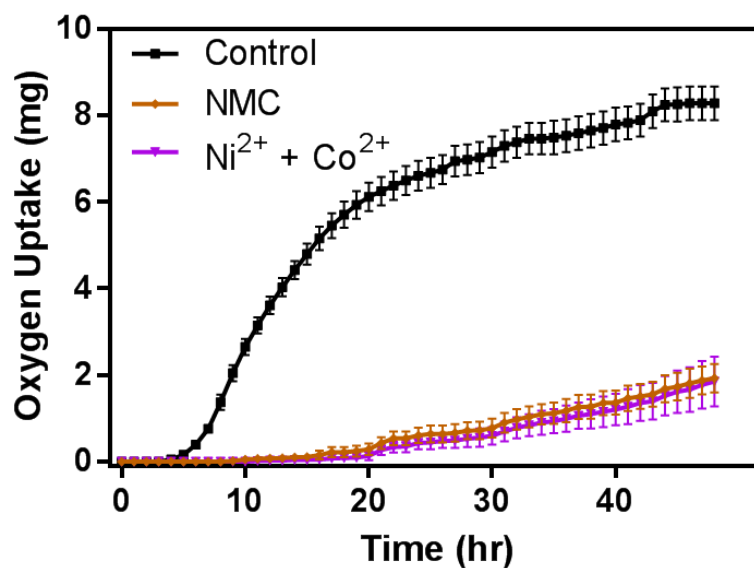


Figure S5. Respirometry response of *B. subtilis* cultures to 5.0 mg/L NMC (brown) and a combination of 0.279 mg/L Ni^{2+} and 0.096 mg/L Co^{2+} (purple) in minimal medium.

Chloride salts were used for all the ions. Error bars represent standard error of means from at least three replicates.

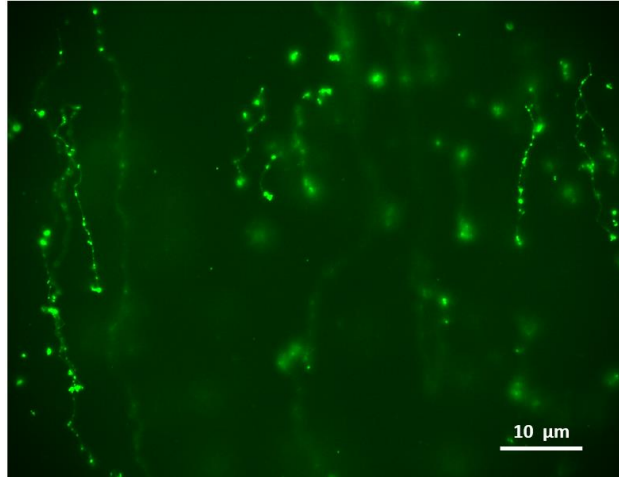


Figure S6. Sample fluorescence microscopic image from single-cell gel electrophoresis analysis of *B. subtilis* DNA damage induced by NMC.