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**Electron-phonon coupling in A15 $Cs_3C_{60}$ and fcc alkali fullerides** TAKASHI KORETSUNE, Tokyo Institute of Technology, SUSUMU SAITO — We study the electron-phonon couplings of alkali-doped fullerides, fcc $A_3C_{60}$ (A=K,Rb) and A15 $Cs_3C_{60}$, using first-principles method based on the density functional theory. To improve the previous studies, we perform accurate calculations of phonon dispersion and electron-phonon coupling including momentum dependence and lattice symmetry. Furthermore, to estimate the superconducting transition temperature, we use Eliashberg equation instead of McMillan's formula. It is found that Eliashberg equation gives a quantitative improvement and that the obtained transition temperatures are reasonable compared to the experiments.

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