

The other available MLIP methods such as SNAP, qSNAP used for benchmarking are provided below:

Cu

SNAP

DOI [10.1021/acs.jpca.9b08723](https://doi.org/10.1021/acs.jpca.9b08723)

Extended KIM ID

SNAP_ZuoChenLi_2019_Cu__MO_931672895580_000

KIM page

https://openkim.org/id/SNAP_ZuoChenLi_2019_Cu__MO_931672895580_000

q-SNAP

DOI: [10.1021/acs.jpca.9b08723](https://doi.org/10.1021/acs.jpca.9b08723).

Extended KIM ID

SNAP_ZuoChenLi_2019quadratic_Cu__MO_265210066873_000

KIM page

https://openkim.org/id/SNAP_ZuoChenLi_2019quadratic_Cu__MO_265210066873_000

Ge

SNAP

DOI: [10.1021/acs.jpca.9b08723](https://doi.org/10.1021/acs.jpca.9b08723).

Extended KIM ID

SNAP_ZuoChenLi_2019_Ge__MO_183216355174_000

KIM page

https://openkim.org/id/SNAP_ZuoChenLi_2019_Ge__MO_183216355174_000

q-SNAP

DOI: [10.1021/acs.jpca.9b08723](https://doi.org/10.1021/acs.jpca.9b08723).

Extended KIM ID

SNAP_ZuoChenLi_2019quadratic_Ge__MO_766484508139_000

KIM page

https://openkim.org/id/SNAP_ZuoChenLi_2019quadratic_Ge__MO_766484508139_000

Li

SNAP

DOI: [10.1021/acs.jpca.9b08723](https://doi.org/10.1021/acs.jpca.9b08723).

Extended KIM ID

SNAP_ZuoChenLi_2019_Li__MO_732106099012_000

KIM page

https://openkim.org/id/SNAP_ZuoChenLi_2019_Li__MO_732106099012_000

q-SNAP

DOI: [10.1021/acs.jpca.9b08723](https://doi.org/10.1021/acs.jpca.9b08723).

Extended KIM ID

SNAP_ZuoChenLi_2019quadratic_Li__MO_041269750353_000

KIM page

https://openkim.org/id/SNAP_ZuoChenLi_2019quadratic_Li__MO_041269750353_000

Mo

SNAP

DOI: [10.1021/acs.jpca.9b08723](https://doi.org/10.1021/acs.jpca.9b08723).

Extended KIM ID

SNAP_ZuoChenLi_2019_Mo__MO_014123846623_000

KIM page

https://openkim.org/id/SNAP_ZuoChenLi_2019_Mo__MO_014123846623_000

q-SNAP

DOI: [10.1021/acs.jpca.9b08723](https://doi.org/10.1021/acs.jpca.9b08723).

Extended KIM ID

SNAP_ZuoChenLi_2019_Mo__MO_014123846623_000

KIM page

https://openkim.org/id/SNAP_ZuoChenLi_2019quadratic_Mo__MO_692442138123_000

Ni

SNAP

DOI: [10.1021/acs.jpca.9b08723](https://doi.org/10.1021/acs.jpca.9b08723).

Extended KIM ID

SNAP_ZuoChenLi_2019_Ni__MO_365106510449_000

KIM page

https://openkim.org/id/SNAP_ZuoChenLi_2019_Ni__MO_365106510449_000

q-SNAP

DOI: [10.1021/acs.jpca.9b08723](https://doi.org/10.1021/acs.jpca.9b08723).

Extended KIM ID

SNAP_ZuoChenLi_2019quadratic_Ni__MO_263593395744_000

KIM page

https://openkim.org/id/SNAP_ZuoChenLi_2019quadratic_Ni__MO_263593395744_000

Si

SNAP

DOI: [10.1021/acs.jpca.9b08723](https://doi.org/10.1021/acs.jpca.9b08723).

Extended KIM ID

SNAP_ZuoChenLi_2019_Si__MO_869330304805_000

KIM page

https://openkim.org/id/SNAP_ZuoChenLi_2019_Si__MO_869330304805_000

q-SNAP

DOI: [10.1021/acs.jpca.9b08723](https://doi.org/10.1021/acs.jpca.9b08723).

Extended KIM ID

SNAP_ZuoChenLi_2019quadratic_Si__MO_721469752060_000

KIM page

https://openkim.org/id/SNAP_ZuoChenLi_2019quadratic_Si__MO_721469752060_000