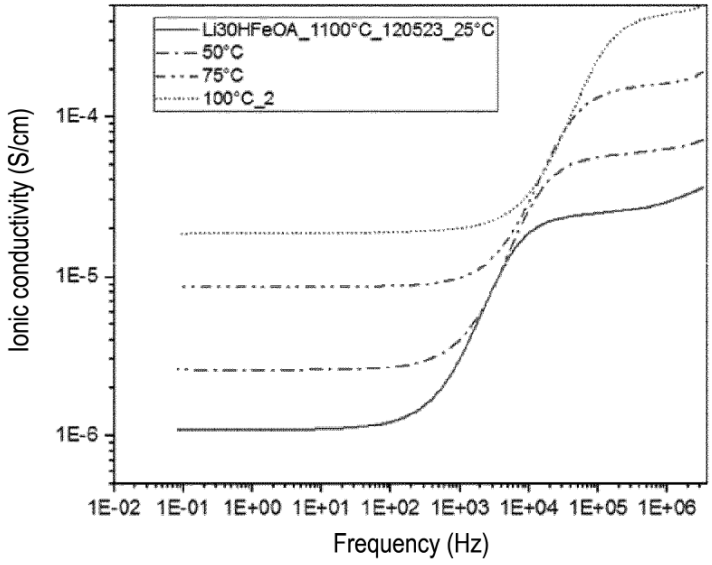
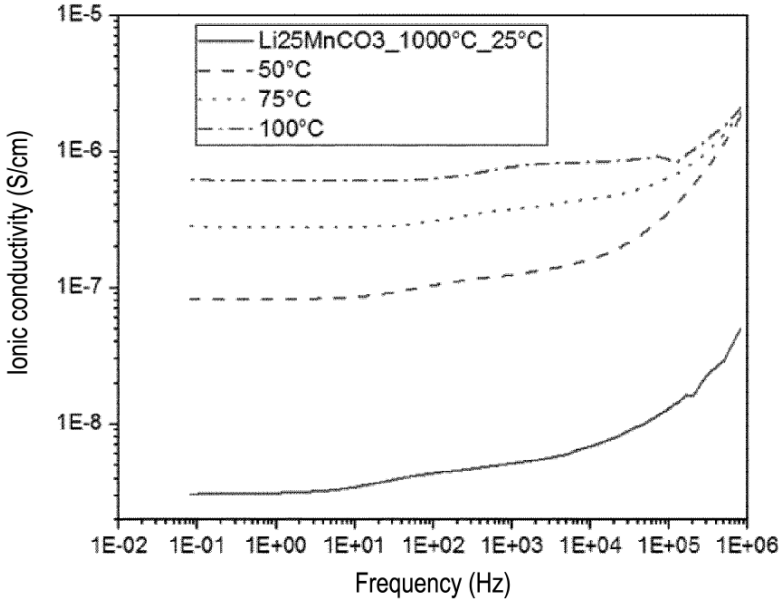
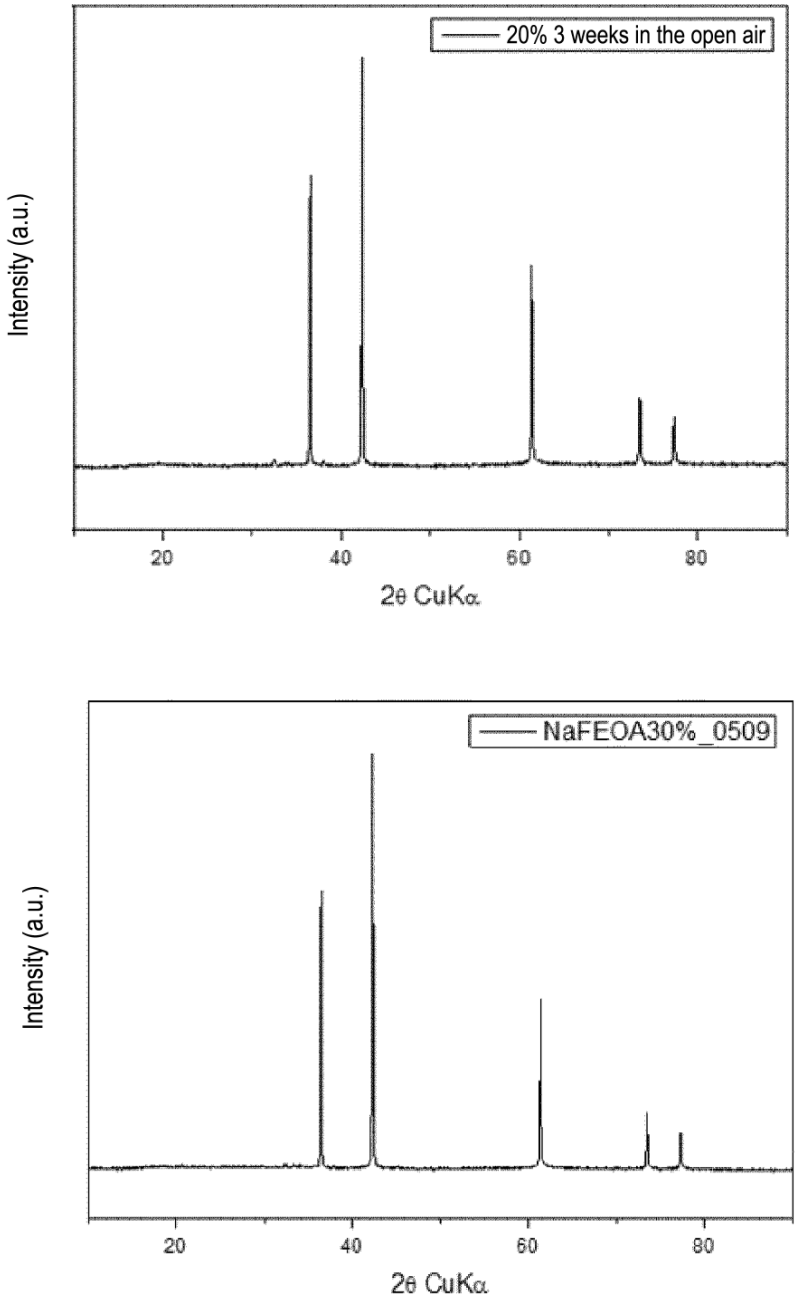
[Fig. 1]


Li30HFeOA_1100°C_120523_25°C
50°C
75°C
100°C_2
Ionic conductivity (S/cm)
1E-4
1E-5
1E-6
1E-02 1E-01 1E+00 1E+01 1E+02 1E+03 1E+04 1E+05 1E+06
Frequency (Hz)

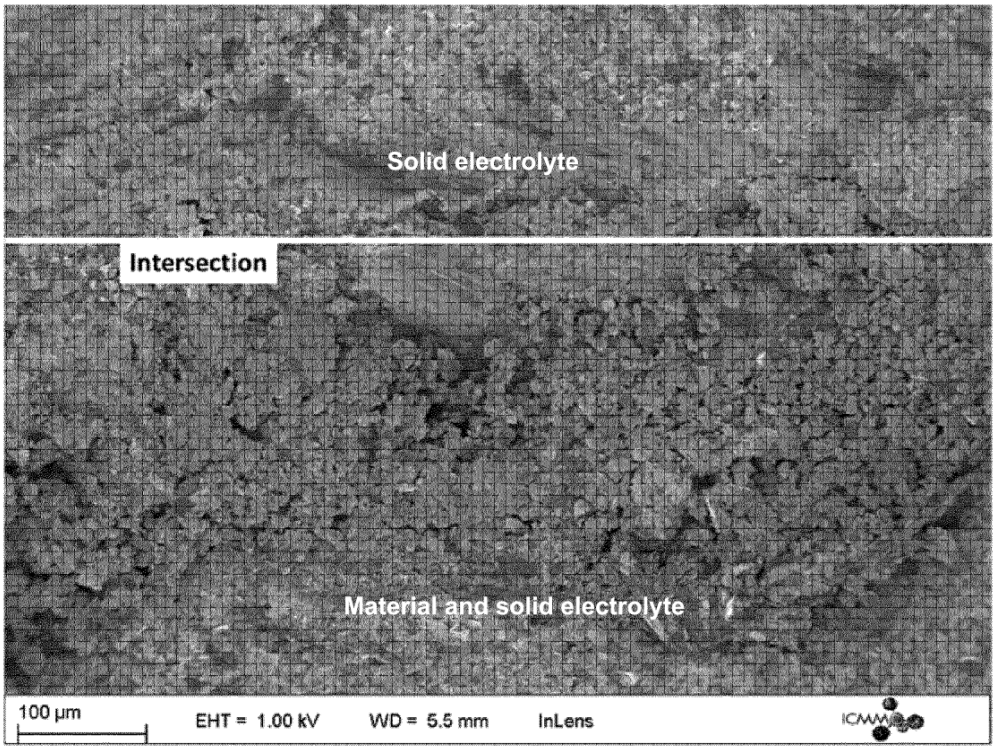
[Fig. 2]


Li25MnCO3_1000°C_25°C
50°C
75°C
100°C
Ionic conductivity (S/cm)
1E-5
1E-6
1E-7
1E-8
1E-02 1E-01 1E+00 1E+01 1E+02 1E+03 1E+04 1E+05 1E+06
Frequency (Hz)

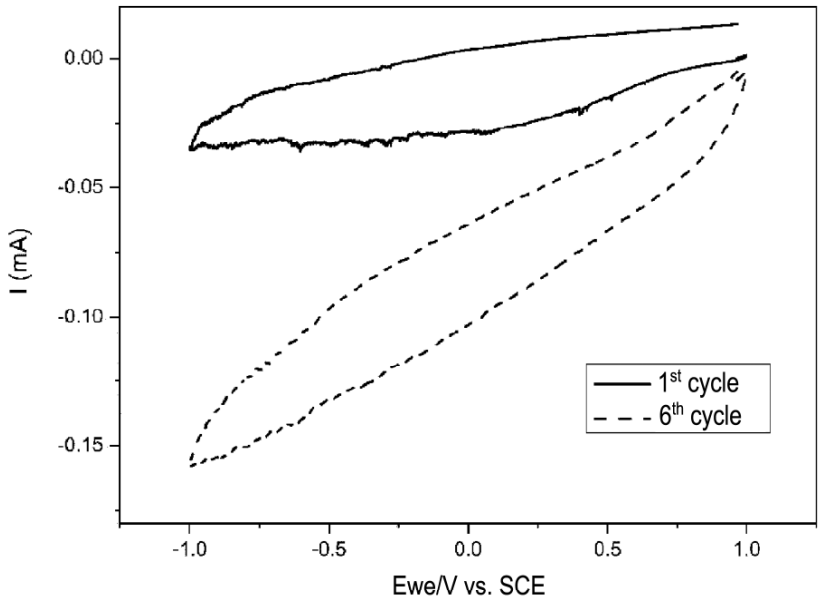
[Fig. 3]


20% 3 weeks in the open air
Intensity (a.u.)
20
40
60
80
2θ CuKα
NaFEOA30%_0509
Intensity (a.u.)
20
40
60
80
2θ CuKα

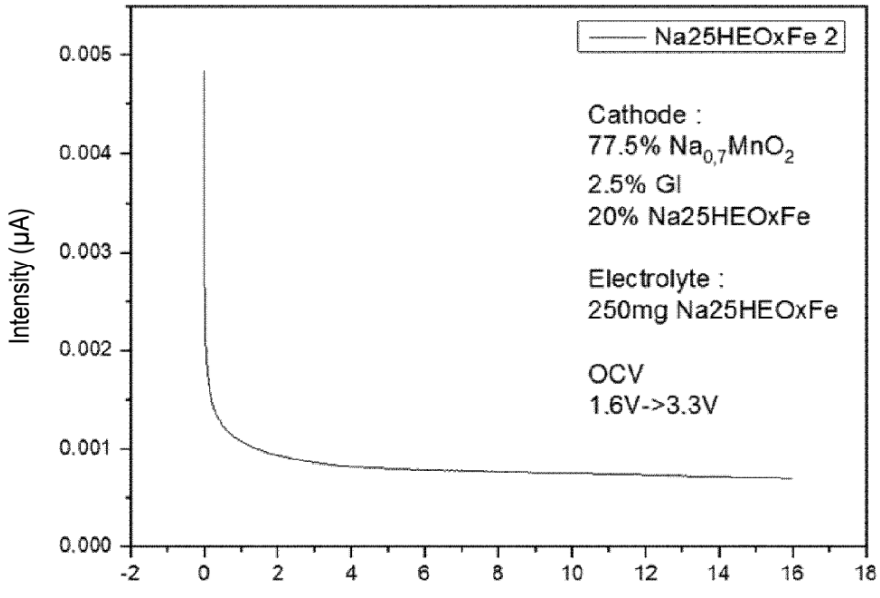
[Fig. 4]


Solid electrolyte
Intersection
Material and solid electrolyte
100 µm
EHT = 1.00 kV
WD = 5.5 mm
InLens

[Fig. 5]

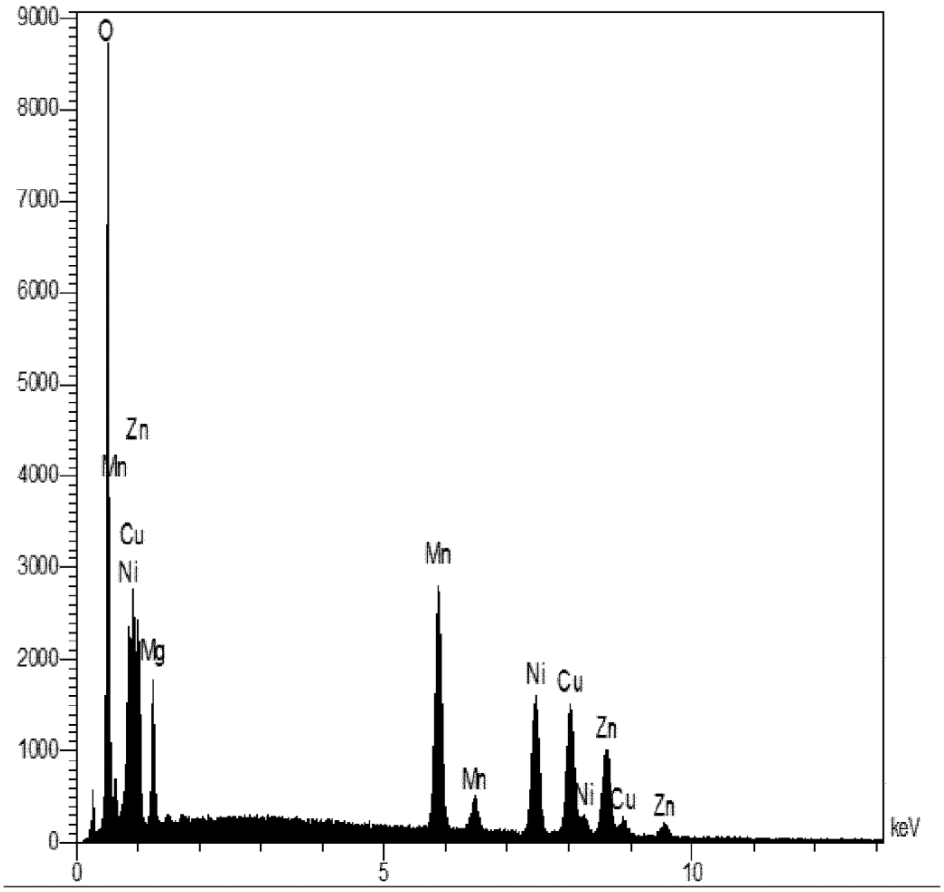


[Fig. 6]

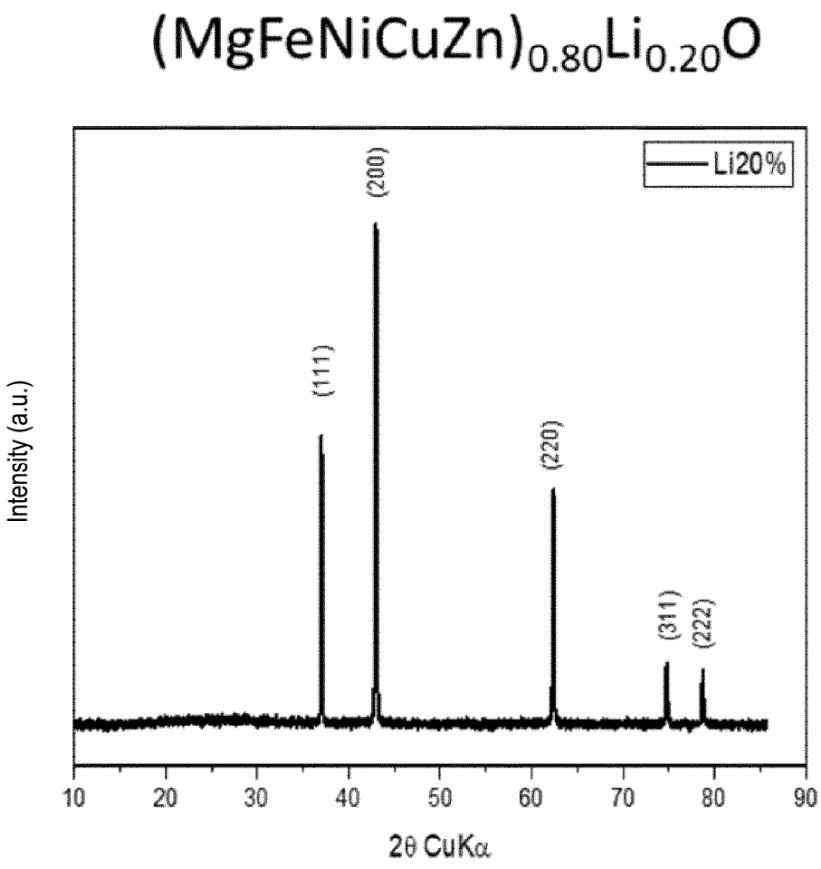


Charge curve of an all-solid-state battery with 25% NaHEOx FeO

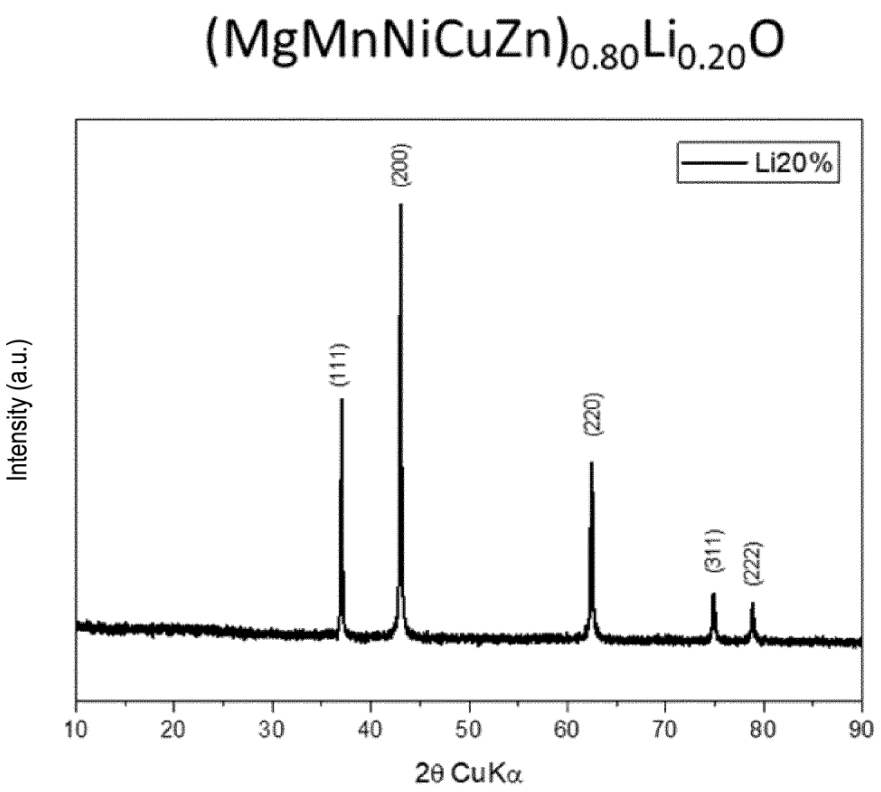
[Fig. 7]


9000
8000
7000
6000
5000
4000
3000
2000
1000
0
O
Zn
Mn
Cu
Ni
Mg
Mn
Mn
Ni
Cu
Zn
Ni
Cu
Zn
keV
0
5
10

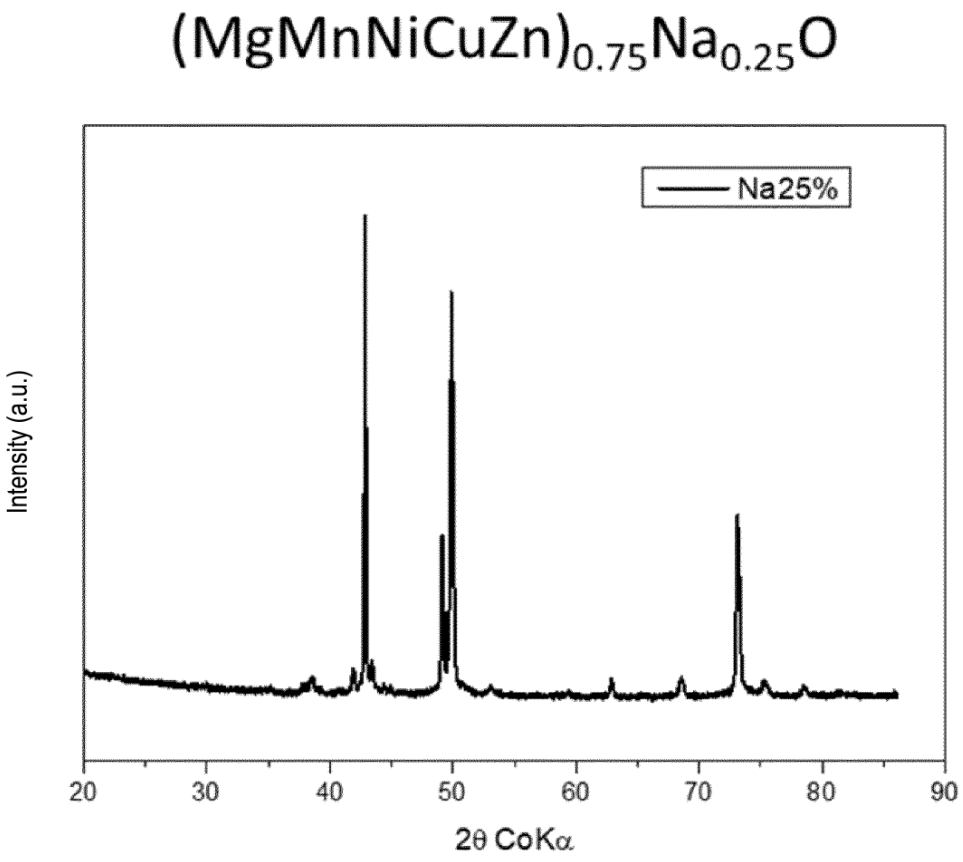
[Fig.8(a)]


(MgFeNiCuZn)0.80Li0.20O
Li20%
(200)
(111)
(220)
(311)
(222)
Intensity (a.u.)
10
20
30
40
50
60
70
80
90
2θ CuKα

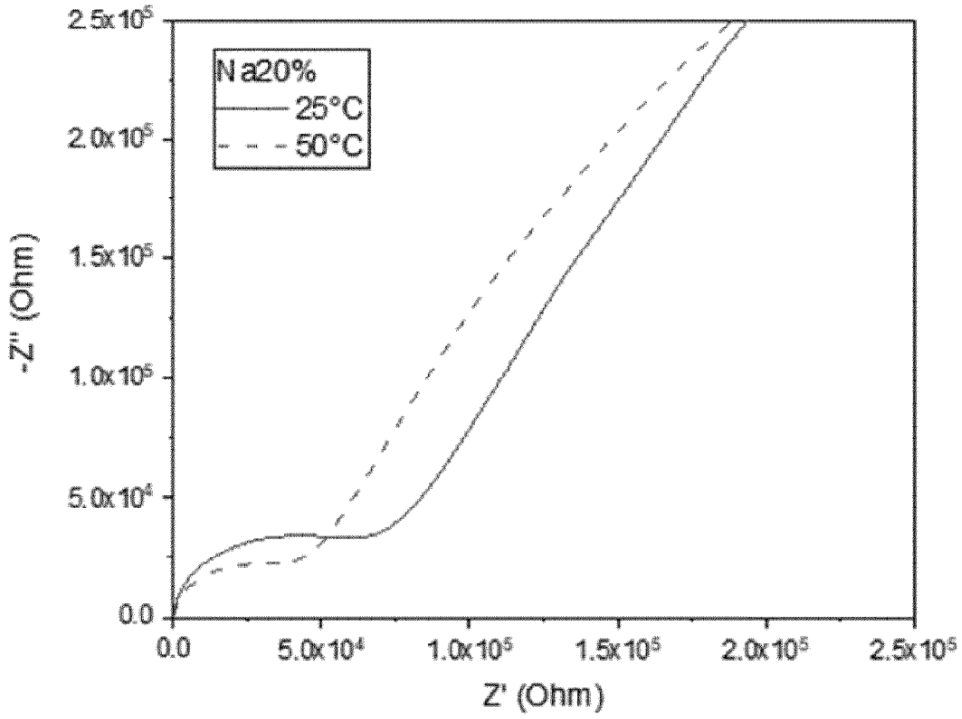
[Fig.8(b)]


(MgMnNiCuZn)0.80Li0.20O
Li20%
(200)
(111)
(220)
(311)
(222)
Intensity (a.u.)
10
20
30
40
50
60
70
80
90
2θ CuKα

[Fig.8(c)]


(MgMnNiCuZn)0.75Na0.25O
Na25%
Intensity (a.u.)
20
30
40
50
60
70
80
90
2θ CoKα

[Fig. 9]


Na20%
25°C
50°C
-Z'' (Ohm)
Z' (Ohm)
0.0
5.0x10^4
1.0x10^5
1.5x10^5
2.0x10^5
2.5x10^5