Supporting Information

From waste metallized film capacitors to valuable materials: hexagonal flake-like micron zinc powder, copper-iron electrodes and energy resource

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Table S1. The bond length and bond energy of some common covalent bond in polymer.

Chemical bond	Bond length (mm)	Bond energy (KJ/mol)
C-C	0.154	347
C=C	0.134	620
C-O	0.146	351
C-H	0.111	414
C=O	0.121	745
O-H	0.096	464
O-O	0.148	142

Table S2. Saturated vapor pressure calculation of Zn, Al and Ag [1]

Metal	A	B	C	D	Temperature range (^{o}C)	Boiling point (^{o}C)
$Zn^{(*)}$	-6620	-1.255		12.34	426-907	907
Al	-16380	-1.0		14.44	660-2450	2450
Ag	-14400	-0.85		13.82	960.8-2147	2147

(*P_{Zn}=P_{Zn}×133.3 Pa)

[1] Y.N. Dai, B.Yang, The vacuum metallurgy of nonferrous metals. Metallurgical Industry Press, Beijing, 2009.