WHAT IS CLAIMED IS:

1. A multiple-part electrochemical thermal signaling or marking system, comprising:

at least one first part comprising at least one super-corroding alloy, a hydrophobic pyrogenic silica, and at least one absorbent material; and

at least one second part comprising at least one component chosen from water, an aqueous solution, at least one electrolyte, and mixtures of any of the foregoing;

wherein heat is emitted when the at least one first part and the at least one second part interact.

2. The multiple-part electrochemical thermal signaling or marking system of claim 1, wherein the at least one absorbent material is chosen from natural and synthetic polymeric absorbents, hydrocolloid/polysaccharide absorbents, cellulosic absorbents, gum and resin absorbents, inorganic absorbents, gel-forming fluid-interactive adhesive dressings, wool, cotton, lint, at least one super-absorbent polymer, and mixtures of any of the foregoing.

3. The multiple-part electrochemical thermal signaling or marking system of claim 1, wherein the at least one absorbent material comprises at least one super-absorbent polymer.

4. The multiple-part electrochemical thermal signaling or marking system of claim 3, wherein the at least one super-absorbent polymer is chosen from polyvinylpyrrolidones, sulfonated polystyrenes, sulfonated polyvinyltoluenes, poly-sulfoethyl acrylates, poly-2-hydroxyethyl acrylates, polyacrylates, hydrolyzed polyacrylamides and copolymers of acrylamide with acrylic acid, hydrocolloid absorbent materials, sodium polyacrylate, potassium polyacrylate, lithium polyacrylate, ammonium polyacrylate, and mixtures of any of the foregoing.

5. The multiple-part electrochemical thermal signaling or marking system of claim 3, wherein the at least one super-absorbent polymer comprises sodium polyacrylate.

6. The multiple-part electrochemical thermal signaling or marking system of claim 3, wherein the at least one super-absorbent polymer is present in an amount

15. The multiple-part electrochemical thermal signaling or marking system of claim 1, wherein the component of the at least one second part is chosen from water and an aqueous solution, and the at least one first part further comprises at least one electrolyte.

16. The multiple-part electrochemical thermal signaling or marking system of claim 15, wherein the at least one electrolyte comprises at least one salt comprising a cation chosen from Li^+ Na^+, K^+, Mg^{2+}, Ca^{2+}, and combinations of any of the foregoing; and an anion chosen from Cl^-, Br^-, I^-, ClO_4^-, BF_4^-, PF_6^-, ASF_6^-, SbF_6^-, $CH_3CO_2^-$, $CF_3SO_3^-$, $N(CF_3SO_2)_2^-$, $C(CF_3SO_2)_2^-$, CO_3^{2-}, and combinations of any of the foregoing.

17. The multiple-part electrochemical thermal signaling or marking system of claim 15, wherein the at least one electrolyte is present in an amount ranging from 0.01 percent to 36 percent by weight, based on the weight of the at least one second part.

18. The multiple-part electrochemical thermal signaling or marking system of claim 1, wherein the component of the at least one second part comprises at least one electrolyte.

19. The multiple-part electrochemical thermal signaling or marking system of claim 18, wherein the at least one electrolyte comprises at least one salt comprising a cation chosen from Li^+ Na^+, K^+, Mg^{2+}, Ca^{2+}, and combinations of any of the foregoing; and an anion chosen Cl^-, Br^-, I^-, ClO_4^-, BF_4^-, PF_6^-, ASF_6^-, SbF_6^-, $CH_3CO_2^-$, $CF_3SO_3^-$, $N(CF_3SO_2)_2^-$, $C(CF_3SO_2)_2^-$, CO_3^{2-}, and combinations of any of the foregoing.

20. The multiple-part electrochemical thermal signaling or marking system of claim 18, wherein the at least one electrolyte is present in an amount ranging from 0.01 % to 36 % by weight, based on the weight of the at least one second part.

~~21. The multiple-part electrochemical thermal signaling or marking system of claim 1, wherein the at least one first part further comprises at least one hydrophobic component.~~

~~22. The multiple-part electrochemical thermal signaling or marking system of claim 21, wherein the at least one hydrophobic component comprises hydrophobic pyrogenic silica.~~

~~23~~21. The multiple-part electrochemical thermal signaling or marking system of claim 1 comprises pellets formed from compressed particles of the least one super-corroding alloy.

~~24~~22. The multiple-part electrochemical thermal signaling or marking system of claim 1 further comprising at least one reflecting element.

~~25~~23. The multiple-part electrochemical thermal signaling or marking system of claim 1 further comprising at least one at least one insulating element.

~~26. A multiple-part electrochemical thermal signaling or marking system, comprising:~~

~~at least one first part comprising at least one super-corroding alloy, a hydrophobic pyrogenic silica, and at least one super-absorbent polymer; and~~

~~at least one second part comprising at least one component chosen from water, an aqueous solution, at least one electrolyte, or mixtures of any of the foregoing;~~

~~wherein heat is emitted when the at least one first part and the at least one second part interact.~~

2~~4~~7. A containment device comprising:

at least one first containment part comprising at least one super-corroding alloy, a hydrophobic pyrogenic silica, and at least one absorbent material,

at least one second containment part comprising a material chosen from water, an aqueous solution, at least one electrolyte, and mixtures of any of the foregoing,

at least one vent member in fluid communication with the outside of the containment device and at least one of the at least one first containment member and the at least one second containment member, and

at least one breakable barrier separating the at least one first containment part from the at least one second containment part;

wherein heat is emitted when the at least one breakable barrier is broken.