Claims

1. A process comprising selecting components:
   a)a noble metal-containing component for example those involved in hydrogen energy generation, the component being incorporated into or otherwise bound to a fluoropolymer;
   b) an inorganic salt, the salt including an alkali metal halide, an alkaline earth metal halide or mixture thereof,
   wherein the components are mixed together and heated in the presence of air to melt the inorganic salt, maintaining the inorganic salt in molten form for a period of 0.5 – 4 hours, cooling to solidify the molten salt, wherein the inorganic salt is a Group II halide.
2. A process according to Claim 1, wherein the molten inorganic salt is a eutectic molten salt.
3. A process according to Claim 1 or Claim 2, wherein the inorganic salt is calcium chloride.
4. A process according to Claim 3, wherein the inorganic salt also includes a Group I alkali metal halide.
5. A process according to Claim 4, wherein the halide is chloride.
6. A process according to Claim 4 or Claim 5, wherein the alkali metal halide is selected from sodium chloride or potassium chloride.
7. A process according to any preceding claim, wherein the components are heated within a range of 700°C – 1100°C.
8. A process according to Claim 7, wherein the components are heated within a range of 700°C – 1000°C.
9. A process according to any preceding claim, wherein in a further step the noble metals are extracted from the resulting solidified inorganic salt mixture containing noble metals.
10. A process according to Claim 9, wherein the further step comprises converting the solidified salt into a friable salt mixture and milling said solid into a powder.
11. A process according to Claim 10 or Claim 10, wherein the solid is contacted with *aqua regia* to dissolve the metals followed by applying solid liquid separation techniques.
12. A process according to Claim 9 or Claim 10, wherein the solid is contacted with concentrated hydrochloric acid to dissolve the metals followed by applying solid liquid separation techniques

13. A process according to any preceding claim, wherein the component is in a shredded / cut form.
14. A process according to Claim 13, wherein the noble metal-containing component is assembled in a tray-like device in layers with the salt mixture intercalated.
15. A process according to Claim 13, wherein the tray-like device is formed of steel.