CLAIMS

1. An apparatus for use in sensing electrochemical change in an object, the apparatus comprising:

a substantially electrically conductive body defining a cavity for containing an electrolyte, the body having a first surface arranged to be, in use, in electrically conductive contact with the object along ~~substantially~~ the whole of a length of the first surface and arranged physically to isolate, in use, the electrolyte from the object; and

at least a first electrode at least partially within the cavity, the first electrode for connection to a potentiostat or a galvanostat and arranged to be, in use, in electrical contact with the electrolyte in the cavity;

wherein the electrically conductive body comprises at least a first part and a second part, the second part slideably movable relative to the first part from a first, retracted, position to a second, extended, position, such that the length of the first surface is greater when the second part is in the second position than when the second part is in the first position.

2. The apparatus of claim 1, wherein the first and second parts are substantially tubular and are arranged such that at least a first portion of one of the parts is radially within the other part when the second part is in the first position.

3. The apparatus of claim 1 or claim 2, wherein the body is arranged to retain electrolyte at ~~substantially~~ any orientation of the body.

4. The apparatus of claim 2 or claim 3, wherein each of the first and second parts comprises an end that is distal from the other part and that is ~~substantially~~ closed.

5. The apparatus of any preceding claim wherein the apparatus further comprises an electrolyte contained by the cavity; a potentiostat or a galvanostat electrically connected to the first electrode; and an electrical connector arranged to be electrically connected to the object.

6. The apparatus of any of claims 1 to 5, wherein the body comprises at least one magnet arranged to, in use, apply a magnetic force to the object and thereby to attach the body to the object.

7. The apparatus of claim 5 wherein the substantially electrically conductive body is a permanent magnet.

8. A system for use in sensing electrochemical change in an object, the system comprising:

a first apparatus according to any preceding claim, wherein the first electrode is a counter electrode; and

a second apparatus according to any preceding claim, wherein the first electrode is a working electrode.

9. The apparatus of any of claims 1 to 8, wherein the apparatus further comprises a substantially electrically conductive overlay on at least a portion of the first surface, the substantially electrically conductive overlay arranged to conduct, in use, electricity between the first surface and the object.

10. The apparatus of claim 9 when dependent on claim 2, wherein the overlay is arranged on a second portion of the second part that is not radially within the first part when the second part is in the first position.

11. The apparatus of claim 9 or 10, wherein the overlay is arranged to be in a first state when the second part is in the first position and in a second state when the second part is in the second position, wherein the second state is extended relative to the first state.

12. The apparatus of claim 11, wherein the overlay is a mesh, folded material or coil that is arranged to be extended or compressed or both.

13. An apparatus according to any preceding claim, wherein ~~substantially~~ all of the body is substantially electrically conductive.

14. An apparatus according to any preceding claim, wherein the body comprises first and second pipes in fluid communication with the cavity, the first pipe arranged to be used to

introduce electrolyte into the cavity, the second pipe arranged to allow air to escape from the cavity.

15. The apparatus according to claim 14, wherein the first pipe extends further into the cavity than the second pipe.