

CLAIMS

1. A flexible composite bandage, comprising: a) an isoporous, self-assembled nanoporous membrane; b) a flexible and/or elastic support; and c) optionally a biocompatible non-stick agent in at least one of the isoporous membrane and support.
2. The flexible composite bandage of claim 1, comprising: a) an isoporous, self-assembled nanoporous membrane having a pore size of from 1 to 200 nm; b) a flexible and/or elastic support; and c) optionally a biocompatible non-stick agent in at least one of the isoporous membrane and support, wherein at least one of the membrane and the support are biocompatible.
3. The flexible composite bandage of claim 1, comprising: an isoporous, self-assembled nanoporous membrane having a pore size of from 1 to 60 nm; b) a flexible and/or elastic support; and c) optionally a biocompatible non-stick agent in at least one of the isoporous membrane and support, wherein at least one of the membrane and the support are biocompatible.
4. A method of providing a wound treating system, comprising associating a isoporous self-assembled nanoporous membrane having a pore size of from 1 to 200 nm to a flexible and/or elastic support to form a unitary bandage, wherein a biocompatible non-stick agent is associated with at least one of the isoporous membrane and support and at least one of the membrane and support are biocompatible.
5. The bandage according to claim 1, wherein the support comprises at least one layer of an air permeable, self-supporting, biocompatible material.
6. The bandage of claim 1, wherein the isoporous membrane is arranged on an outmost layer.

7. The bandage of claim 5, wherein the support includes a plurality of layers and the isoporous membrane is arranged between two of the plurality of layers.
8. The bandage according to claim 1, wherein a biocompatible non-stick agent is coated on at least one of the isoporous membrane and support.
9. The bandage according to claim 1, wherein the bandage is pathogen specific.
10. The bandage according to claim 1, wherein at least one of the membrane and support include a pharmaceutical agent.
11. The bandage according to claim 1, wherein at least one of the membrane and support include a pharmaceutical drug.
12. A kit comprising different pathogen specific bandages according to claim 1.
13. A method of treating a wound, comprising adhering a bandage according to claim 1 to a wound.
14. A method of treating a wound comprising, selecting a pathogen specific bandage of claim 9, and adhering the pathogen specific bandage to a wound.
15. A kit comprising different pathogen specific bandages, at least one first bandage comprising an isoporous, self-assembled nanoporous membrane having a pore size of from 1 to 60 nm, at least one second bandage comprising an isoporous, self-assembled nanoporous membrane having a pore size of from 1 to 100 nm, an additional bandage comprising an isoporous, self-assembled nanoporous membrane having other pore sizes, including at least a pore size of from 1 to 200 nm.
16. An article, comprising: a) an isoporous, self-assembled nanoporous membrane having a pore size of from 1 to 200 nm; b) a flexible and/or elastic support; wherein the article provides at least one of biocompatibility, biodegradability, anti-bacterial/microbial, non-stick, enhances cell growth, and drug eluting.

17. The kit of claim 16, where the bandage provides at least one of biocompatibility, biodegradability, anti-bacterial/microbial, non-stick, cell growth enhancement and drug elution.
18. A sensor comprising the material of claim 1.
19. A process detecting at least one analyte of interest contacting a medium containing the analyte of interest with the material of claim 1.