

through a soft rubber wringer to remove excess emulsion. The impregnated fabric was then placed in an environmental chamber maintained at about 60–65° C. and 100% relative humidity under nitrogen for 60 minutes. The sample was then cooled to room temperature, washed twice (each wash was 15 minutes) with distilled water, then dried to constant weight.

EXAMPLE 7

The water porosity of the coated medical fabric of Example 6 was determined in a laboratory apparatus as described in AAMI Standards & Recommended Procedures, 1989, Reference Book; and in “Evaluation of Tissue and Prosthetic Vascular Grafts”, p. 62, Charles Thomas, Publisher, Springfield, Ill., 1962. In the water porosity test, the coated medical fabric of Example 6 was placed over a hole, and a metal plate, containing a concentric hole of the same size, was clamped over the sample. Water was permitted to flow through the fabric, and the pressure was adjusted until the specific test pressure was reached. Porosity was calculated as follows:

$$\text{Porosity} = Q/A$$

where,

Q=flow rate through the sample in cc/minute @ 120 mm Hg, and

A=the cross-sectional area in cm² of the hole.

The following table sets forth the porosity data for the medical fabric coated with Polymer D.

Water Porosity of Hydrogel Coated Knitted Polyester Fabric			
Sample	Number of Coats	Sealant as wt % of Total Specimen	Porosity (ml/min./cm ²)
uncoated control specimen 1 (20% solids)	1	20.7	559.0
specimen 2 (20% solids)	1	21.0	0.0
specimen 3 (20% solids)	2	29.9	2.6
specimen 4 (20% solids)	3	19.1	0.0
			9.4

The invention being thus described, it will be obvious that the same may be varied in many ways. Such variations are not to be regarded as a departure from the spirit and scope of the invention and all such modifications are intended to be included within the scope of the following claims.

What is claimed is:

1. A medical device having on at least one surface thereof a bioresorbable coating composition, said composition comprising a hydrogel formed from the crosslinking of a polymer comprising the reaction of (i) a bioresorbable region; (ii) a hydrophilic region; (iii) a plurality of crosslinkable functional groups; and (iv) a crosslinking agent.

2. The medical device of claim 1 formed from an implantable material.

3. The medical device of claim 2, wherein said implantable material is selected from the group consisting of polymeric compositions, non-polymeric compositions and combinations thereof.

4. The medical device of claim 3, wherein said implantable material is further selected from the group of olefinic polymeric compositions consisting of polyethylene, polypropylene, polyvinyl chloride, polytetrafluoroethylene,

fluorinated ethylene propylene copolymer, polyvinyl acetate, polystyrene, poly(ethylene terephthalate), polyurethane, polyurea, silicone rubbers, polyamides, polycarbonates, polyaldehydes, natural rubbers, polyether-ester copolymers, styrene-butadiene copolymers and combinations thereof.

5. The medical device of claim 3, wherein said implantable material is further selected from the group of non-polymeric compositions consisting of ceramics, metals, inorganic glasses, pyrolytic carbon and combinations thereof.

6. The medical device of claim 1, wherein said device is an endoprosthesis.

7. The medical device of claim 6, wherein said endoprosthesis is selected from the group consisting of grafts, stents and graft-stent devices.

8. The medical device of claim 2, selected from the group consisting of catheters, guide wires, trocars and introducer sheaths.

9. The medical device of claim 4, wherein said implantable material is a vascular or endovascular graft.

10. The medical device of claim 9, wherein said vascular or endovascular graft is a knitted, braided or woven textile.

11. The medical device of claim 2, wherein said implantable material is made from an extruded polymer.

12. A process for forming a hydrogel comprising:
a. combining (i) a bioresorbable region; (ii) a hydrophilic region; (iii) a plurality of crosslinkable functional groups per polymer chain; and (iv) a crosslinking agent to form an aqueous emulsion of a water-insoluble copolymer; and
b. activating said crosslinking agent.

13. The process of claim 12, wherein said crosslinkable functional groups are olefinically unsaturated.

14. The process of claim 12, wherein said crosslinking agent is a free radical initiator.

15. The process of claim 12, wherein said crosslinking agent is an azo or a peroxide composition.

16. The process of claim 12, wherein said crosslinking agent is thermally or photochemically activated.

17. A process for forming a medical device coated with a hydrogel comprising:

a. applying said hydrogel to said medical device, said hydrogel formed from an aqueous emulsion comprising a water-insoluble copolymer having (i) a bioresorbable region; (ii) a hydrophilic region; (iii) a plurality of crosslinkable functional groups per polymer chain; and (iv) a crosslinking agent; and
b. activating said crosslinking agent in a humid environment.

18. The process of claim 17, wherein said hydrogel is dehydrated.

19. The process of claim 17, wherein said hydrogel is maintained in a hydrated state.

20. The process of claim 17, further including adding a drug or bio-active agent to said emulsion.

21. The process of claim 20, wherein said drug bio-active agent is thrombo-resistant agents, antibiotic agents, anti-tumor agents, antiviral agents, anti-angiogenic agents, angiogenic agents, anti-inflammatory agents, cell cycle regulating agents, and chemically modified equivalents and combinations thereof their homologs, derivatives, fragments, pharmaceutical salts and combinations thereof.

22. The process of claim 20, wherein said drug or bio-active agent is selected from the group of thrombo-resistant agents consisting of heparin, heparin sulfate, hirudin, hyaluronic acid, chondroitin sulfate, dermatan sulfate, keratan