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(54) Title: GOLD SURFACES COATED WITH A THERMOSTABLE, CHEMICALLY RESISTANT POLYPEPTIDE LAYER  
AND APPLICATIONS THEREOF

(57) Abstract: The present invention provides a method for producing biomolecular coatings on devices having gold surfaces. The method describes the production of recombinant fusion proteins consisting of one or more polypeptide domains of interest and a high affinity gold binding peptide consisting of 1 to 7 repeats of a gold binding protein (GBP) sequence. By this method, many biologically active polypeptides lacking intrinsic gold-binding properties can be firmly attached to gold surfaces. By exploiting such gold binding properties, devices are disclosed which comprise such coatings that are useful as prosthetic devices, implants, and tissue interfacing materials. Further, such devices comprising these coatings protect surfaces from fouling and impart various properties to the coated devices.



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International application No.

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**A. CLASSIFICATION OF SUBJECT MATTER**  
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 USPC: 424/423;435/6,287.1,287.9,174;530/327  
 According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**  
 Minimum documentation searched (classification system followed by classification symbols)  
 U.S. : 424/423; 435/6, 287.1, 287.9, 174; 530/327

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 Please See Continuation Sheet

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,239,255 B1 (FURLONG et al.) 29 May 2001 (29.05.2001), column 2, lines 34-44, 49-52, and 55-56, column 3, lines 1-15, column 4, lines 54-67, column 6, lines 50-67, Table 1, claim 1.	1-56
Y	JP 01-156649 A (SEKIMUKAI et al.) 20 June 1989 (20.06.1989), abstract.	1-56
Y	US 2004/0131614 A1 (BANERJEE et al. ) 08 July 2004 (08.07.2004), paragraph 0006, 0040, 0119 and 0136.	1-56

<input type="checkbox"/> Further documents are listed in the continuation of Box C.	<input type="checkbox"/> See patent family annex.
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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer /Lisa J. Hobbs/ <i>J. Roberts for</i> Telephone No. 571-272-1600

Continuation of B. FIELDS SEARCHED Item 3:

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