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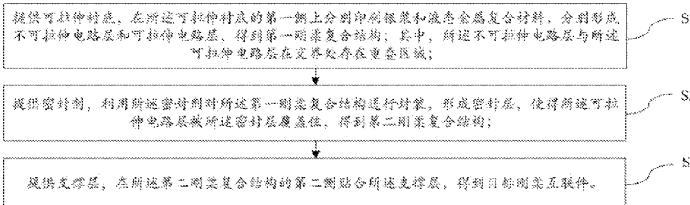
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(54) Title: STRETCHABLE RIGID-FLEX INTERCONNECTION MEMBER AND MANUFACTURING METHOD THEREFOR

(54) 发明名称: 可拉伸的刚柔互联件及其制作方法

[图1]



S1 Provide a stretchable substrate, and print silver paste and a liquid metal composite material respectively on a first side of the stretchable substrate to form a non-stretchable circuit layer and a stretchable circuit layer, respectively, to obtain a first rigid-flex composite structure, wherein an overlapping area exists at a junction of the non-stretchable circuit layer and the stretchable circuit layer

S2 Provide a sealant, and use the sealant to encapsulate the first rigid-flex composite structure to form a sealing layer, such that the stretchable circuit layer is covered by the sealing layer to obtain a second rigid-flex composite structure

S3 Provide a support layer, and attach the support layer to a second side of the second rigid-flex composite structure to obtain a target rigid-flex interconnection member

(57) Abstract: Disclosed in the present invention are a stretchable rigid-flex interconnection member and a manufacturing method therefor. The method comprises: providing a stretchable substrate, and printing silver paste and a liquid metal composite material respectively on a first side of the stretchable substrate to form a non-stretchable circuit layer and a stretchable circuit layer, respectively, to obtain a first rigid-flex composite structure, wherein an overlapping area exists at a junction of the non-stretchable circuit layer and the stretchable circuit layer; providing a sealant, and using the sealant to encapsulate the first rigid-flex composite structure to form a sealing layer, such that the stretchable circuit layer is covered by the sealing layer to obtain a second rigid-flex composite structure; and providing a support layer, and attaching the support layer to a second side of the second rigid-flex composite structure to obtain a target rigid-flex interconnection member. In the present invention, the rigid-flex interconnection member for electronic interconnection between a rigid circuit system and a flexible circuit system can be truly formed, and the entire rigid-flex interconnection member has excellent stretchable performances, and can meet the requirements of rigid-flex interconnection electronic products such as wearable

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本国际公布:
— 包括国际检索报告(条约第21条(3))。

electronic devices at the current stage.

(57) 摘要: 本发明公开了一种可拉伸的刚柔互联件及其制作方法, 方法包括提供可拉伸衬底, 在可拉伸衬底的第一侧上分别印刷银浆和液态金属复合材料, 分别形成不可拉伸电路层和可拉伸电路层, 得到第一刚柔复合结构; 不可拉伸电路层与可拉伸电路层在交界处存在重叠区域; 提供密封剂, 利用密封剂对第一刚柔复合结构进行封装, 形成密封层, 使得可拉伸电路层被密封层覆盖住, 得到第二刚柔复合结构; 提供支撑层, 在第二刚柔复合结构的第二侧贴合支撑层, 得到目标刚柔互联件。本发明能真正形成刚性电路系统和柔性电路系统之间电子互联的刚柔互联件, 整个刚柔互联件具有优良的可拉伸性能, 能满足现阶段可穿戴电子装置等刚柔互联电子产品的要求。