resistivity (R_v) of the surface portion **303** is within a range between about 1.0×10^6 Ωcm and about 1.0×10^9 Ωcm.

[0063] As such, the monolithic article **300**, and notably the surface portion **303** can include a material having such a volume resistivity. As will be appreciated, in embodiments utilizing a monolithic structure, while the surface portion and the body portion are described as distinct portions, such portions can include the same materials and properties. Accordingly, the surface portion **303**, and in fact the body portion **301** for a monolithic stage, can include an inorganic material. Suitable inorganic materials can include carbides, nitrides, and oxides, or combinations or compound inorganic materials thereof. In one embodiment, the monolithic article **300** (i.e., the body portion **301** and the surface portion **303**) includes a metal oxide, such as an oxide including a transition metal. Particularly suitable metal oxides, can include Al_2O_3, SiO_2, Cr_2O_3, MgO, ZrO_2, TiO_2, Y_2O_3, and Fe_2O_3, and combinations or complex compounds thereof.

[0064] According to one embodiment, suitable carbides can include silicon carbide. In one particular embodiment, the monolithic article **300** includes not less than about 20 vol % silicon carbide. Still, in another embodiment, the monolithic LCD article **300** includes not less than about 50 vol %, such as not less than about 75 vol % SiC, 95 vol %, or even not less than about 99.9 vol % SiC. According to one particular embodiment, the monolithic article **300** consists essentially of SiC.

[0065] According to another embodiment, the monolithic article **300** is a dense object, having little open or closed porosity. As such, the a porosity is generally not greater than about 5.0 vol %. In another embodiment, the porosity is less, such as not greater than about 2.0 vol %, not greater than about 1.0 vol %, or even not greater than about 0.5 vol %. Accordingly, the monolithic article **300** typically has a density of not less than about 90% of theoretical density. Other embodiments exhibit a greater density, such as not less than about 95%, or even not less than about 99% of the theoretical density of the material.

[0066] In addition to a dense material, the monolithic article **300** can be mechanically robust. Generally, the stiffness of the monolithic article **300** is not less than about 100 GPa. In one particular embodiment, the electrostatic dissipative monolithic article **300** has a stiffness of not less than about 150 GPa, such as not less than about 200 GPa, or even not less than about 300 GPa. In particular instances, the stiffness of the monolithic article **300** is not greater than about 500 GPa.

[0067] More particularly, the monolithic article **300** has a high specific stiffness, generally not less than about 50 GPa/cm^3. In one particular embodiment, the specific stiffness is not less than about 60 GPa/cm^3, not less than about 75 GPa/cm^3, or even not less than about 100 GPa/cm^3. Still, in certain embodiments, the specific stiffness is not greater than about 500 GPa/cm^3.

[0068] According to an alternative embodiment, the articles described herein can include separately formed portions (non-monolithic design), such that the surface portion is a distinctly formed portion (e.g., a skin portion) overlying the body portion, otherwise referred to as a substrate. Referring to FIG. **4**, a cross-sectional view of an article **400** used for processing LCDs is provided which illustrates a substrate **401** and a skin portion **403** overlying the substrate **401**. In one particular embodiment, the skin portion **403** is in direct contact with the substrate **401** and overlies not less than about 50% of the total surface area of the substrate **401**. Still, the skin portion **403** can cover a greater amount of the substrate **401**, such as not less than about 75%, or not less than about 90% of the total surface area of the substrate **401**. In one particular embodiment, the skin portion **403** covers essentially the entire surface area of the substrate **401**.

[0069] In such embodiments utilizing a stage having multiple components, that is, a substrate **401** and skin portion **403**, the skin portion can be formed on the substrate as a reacted layer. In one such embodiment, the skin portion can be a grown layer, formed as a desired reaction between the surface of the substrate **401** and a reactant. The reactant may be provided in the atmosphere, such as for example, an atmosphere containing a high concentration of oxygen can be provided to form a reacted, oxidized layer.

[0070] Alternatively, the skin portion **403** can be a deposited layer formed via a deposition or spraying process. In one embodiment, the skin portion **403** is formed via a thin-film deposition process, such as a CVD, PVD, or ALD, or any combination thereof. In another embodiment, the skin portion **403** is formed via a spraying process, such as a thermal spraying process, and more particularly by a plasma spraying process or flame spraying process.

[0071] Moreover, formation of the skin portion **403** via a deposition process facilitates a doping procedure. Typically, the type of dopant depends upon the desired material of the skin portion **403**, however, particularly suitable dopants can include metal elements, such as transition metal elements. In another embodiment, the skin portion **403** can include provision of a dopant containing an element from Group IIIA, IVA, VA, or VIA of the Periodic Table. In such embodiments, particularly suitable dopants include B and N. It is noted that dopant use may be limited due to contamination concerns.

[0072] The skin portion **403** generally has an average thickness of not less than about 5 microns, depending upon the method of forming. In one embodiment, the average thickness of the skin portion **403** is not less than about 10 microns, such as not less than about 20 microns, or even not less than about 30 microns. Still, the average thickness of the skin portion **403** is generally not greater than about 500 microns, and particularly within a range between about 10 to about 300 microns.

[0073] The skin portion **403** can include an electrostatic dissipative material having a volume resistivity (R_v) within a range between about 1E6 Ωcm and about 1E11 Ωcm. In one embodiment, the volume resistivity (R_v) of the skin portion **403** is within a range between about 1E6 Ωcm and about 1E9 Ωcm. Notably, the skin portion **403** can include the same materials, properties, and characteristics as those of the monolithic stage described above.

[0074] Accordingly, the skin portion can include an inorganic material, and more particularly, inorganic materials such as carbides, nitrides, and oxides, or combinations or compound materials thereof. In one particular embodiment, the skin portion **403** includes a metal oxide, such as an oxide including a transition metal. Particularly suitable metal oxides, can include Al_2O_3, SiO_2, Cr_2O_3, MgO, ZrO_2, TiO_2, Y_2O_3, and Fe_2O_3, and combinations or complex compounds thereof. Still, in another embodiment, the skin portion **403** can include SiC. Particular embodiments may utilize not less than about 20 vol % SiC, such as not less than about 75 vol % SiC, or even not less than about 95 vol % SiC in the skin portion **403**.