

**935**, having a thickness larger than that of the first substrate **930**. In the case where a plastic film is used for the second substrate, when the elements formed onto the first substrate **930** are transferred onto the plastic film—which is to say when the layer to be peeled **933** and the film are adhered to each other by the first adhesive **934** and the film is lifted up—there was a risk that the film will bend and cause cracks to form in the layer to be peeled **933**. Therefore, after fixing the layer to be peeled **933** formed over the first substrate **930** to the rigid second substrate **935** with the first adhesive **934**, the first substrate **930** is peeled. Then, after the plastic film (i.e., the third substrate **937**) is fixed to the layer with the second adhesive **936**, the second substrate **935** is removed. By following this procedure, it becomes difficult for cracks to occur.

[0191] Next, peeling is performed from the above-mentioned region where the adhesiveness has been reduced, and the first substrate **930** having the first material layer **931** is separated by using a physical means. (See FIG. 11C) Since the second material layer **932** exhibits compressional stress and the first material has tension stress, the separation can be achieved with relatively little force (such as the force of a human hand, or wind pressure of gas blown from a nozzle, or ultrasonic waves, etc.).

[0192] It thus becomes possible to separate the layers to be peeled **933a** and **933b** formed on the second material layer **932** from the first substrate **930**.

[0193] Subsequently, the third substrate **937** and the second material layer **932** (and layers to be peeled **933a**, **933b**) are bonded together by the second adhesive **936** (FIG. 11D). It is essential that the adhesive **936** has greater adhesive force than that of the adhesive **903**.

[0194] The second adhesive **936** may be a reactive-curing type adhesive, a thermal-curing type adhesive, an ultraviolet-curing type adhesive or other such photo-curing type adhesive, or may be an aerophobic-type adhesive, or other various types of curing adhesive. In this embodiment, for the second adhesive **936**, used is a thermal-curing type adhesive. Further, in the case where the second adhesive **936** is made of a material which is soluble so as to dissolve in a solvent, or is photosensitive such that it loses adhesive strength when exposed to light, it becomes possible to peel the third substrate at a later step, and it is possible for only the film **902**, the first adhesive and the second adhesive to serve as the supports.

[0195] A flexible substrate can be used for the third substrate **937**. In this embodiment, the plastic film used for **902** also is used for the third substrate **937**.

[0196] After the state shown in FIG. 11D is obtained, the adhesive **903** is irradiated by ultraviolet so that the adhesive force is weakened, therefore, only the second substrate **935** is separated (FIG. 11E). The second substrate **935** is easily peeled by irradiating ultraviolet, the second substrate **935** and the film **902** are separated thereby.

[0197] The steps described above enable the manufacture of a semiconductor device equipped with the layers to be peeled **933a**, **933b** which serves as a support for the second adhesive **936** and the third substrate **937**. Then, by curving the device as shown in FIG. 11F, it thus becomes possible to achieve a semiconductor device in which the curved surface of the semiconductor device exhibits a radius of

curvature of from 50 cm to 200 cm. When curving the device, it can be attached to the curved surface to which it is going to be mounted. Note that, between the second adhesive **936** and the layer to be peeled **933a**, there is the oxide layer **932** that is the second material layer. In the semiconductor device obtained as described above, the second material layer **932** is applied by a sputtering method and minute amounts of inert gas elements are included in the second material layer **932**. Therefore, the semiconductor device as a whole can be made flexible.

[0198] External views of a bent semiconductor device having a light emitting element in which a layer containing an organic compound serves as a light emitting layer obtained by above steps are shown in FIGS. 12A and 12B.

[0199] FIG. 12A and FIG. 12B respond to FIG. 1, the same reference symbols are used for the same portions. A semiconductor shown in FIG. 12A emits light in a direction of an arrow indicated in FIG. 12A, and the device is bent in a bending direction **19**. Although not illustrated here, all channel length directions of a large number of semiconductor layers provided on a pixel portion **12** and a driver circuit **17** are aligned with the same direction. In addition, assume that the laser light irradiation direction, that is, a scanning direction is the same direction as the channel length directions. Thus, when the crystal growth direction is aligned with the channel length direction, the field effect mobility can be substantially increased.

[0200] Further, a semiconductor device shown in FIG. 12B emits light in an opposite direction to the one shown in FIG. 12A, and the device is bent in a bending direction **19**. Note that the emitting direction can be defined at operator's discretion in accordance with manufacturing methods of a light emitting element in which a layer containing an organic compound serves as a light emitting layer and compositions of pixel circuits.

[0201] [Embodiment 5]

[0202] The present embodiment illustrates an example in which a display having the curved surface obtained by the technique presented in any one of Embodiments 1 through 4 is mounted in a vehicle. Here, an automobile is used as a representative example of a vehicle, but restriction is not made to an automobile. Rather, it goes without saying that the invention may be applied in an aircraft, a train, an electric train, or the like.

[0203] FIG. 13 is a diagram showing the vicinity around a driver's seat in an automobile. A dashboard portion is provided with sound playback systems, specifically including a car audio system and a navigating system. A main unit **2701** of the car audio system includes a display portion **2702** and operating switches **2703** and **2704**. By executing the present invention in the display portion **2702**, a thin and lightweight car audio system can be achieved. Further, by executing the present invention in the car navigation system, a thin and lightweight car navigation system can be achieved.

[0204] Further, near a steering wheel portion **2602**, the dashboard portion **2601** is formed with a display portion **2603** in which digital displays of a speedometer and other such measuring instruments are made. By executing the present invention in the display portion **2702**, thin and lightweight mechanical display instruments can be achieved.