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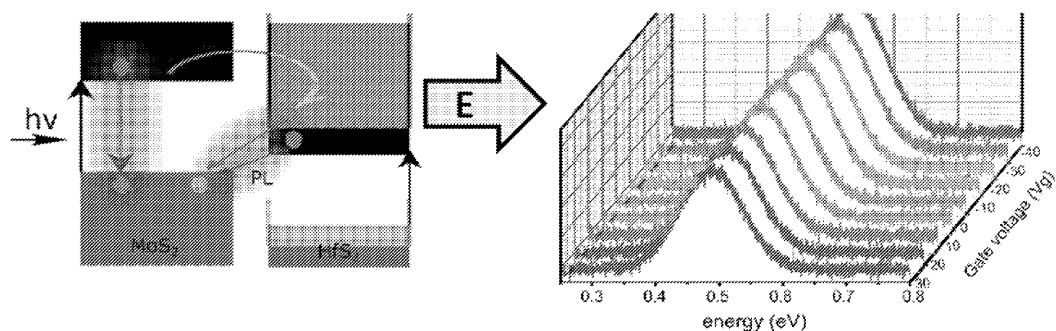
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(54) Title: DEVICES COMPRISING MULTIPLE TWO-DIMENSIONAL TRANSITION METAL DICHALCOGENIDE MATERIALS

FIG. 1B



(57) Abstract: A device which detects and/or emits infrared radiation in the mid-infrared to far-infrared region is disclosed herein. The device comprises a first layer comprising a first transition metal dichalcogenide, and a second layer comprising a second transition metal dichalcogenide, wherein the second layer is deposited adjacent to the first layer to form a first interface which interlayer excitons are producible from for rendering the device operable to detect and/or emit infrared radiation in the mid-infrared to far-infrared region.

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