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[54] METHOD OF MAKING A DUAL DAMASCENE INTERCONNECT STRUCTURE USING LOW DIELECTRIC CONSTANT MATERIAL FOR AN INTER-LEVEL DIELECTRIC LAYER

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[22] Filed: Aug. 20, 1997

85, 902, 629, 636, 648, 653, 656, 687

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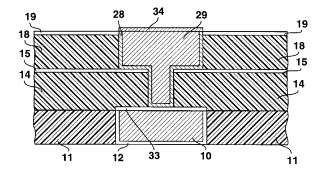
Pending Patent Application titled, "Use of Cobalt Tungsten Phosphide as a Barrier Material for Copper Metallization", Serial No. 08/754,600, filed Nov. 20, 1996.

Primary Examiner—John F. Niebling Assistant Examiner—David A. Zarneke

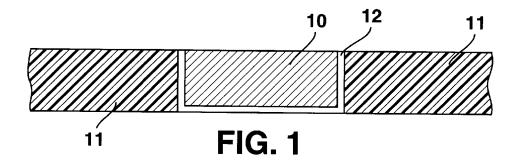
[57] ABSTRACT

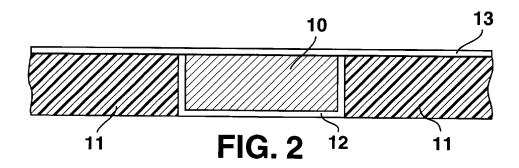
A technique for fabricating a dual damascene interconnect structure using a low dielectric constant material as a dielectric layer or layers. A low dielectric constant (low-) dielectric material is used to form an inter-level dielectric (ILD) layer between metallization layers and in which via and trench openings are formed in the low- ILD. The dual damascene technique allows for both the via and trench openings to be filled at the same time.

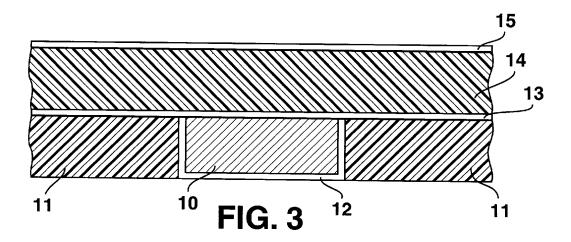
12 Claims, 6 Drawing Sheets

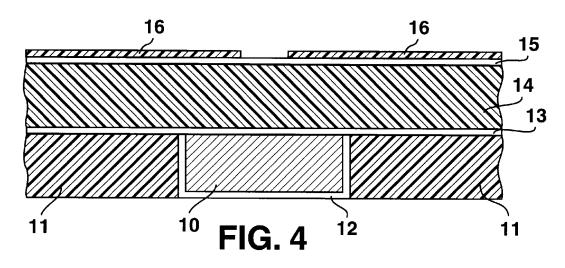


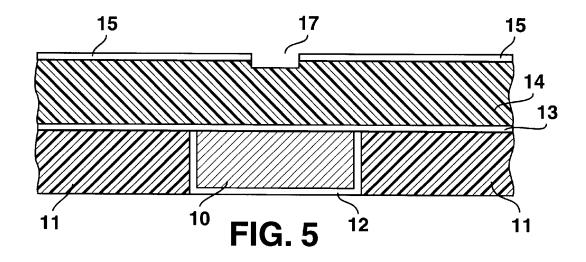


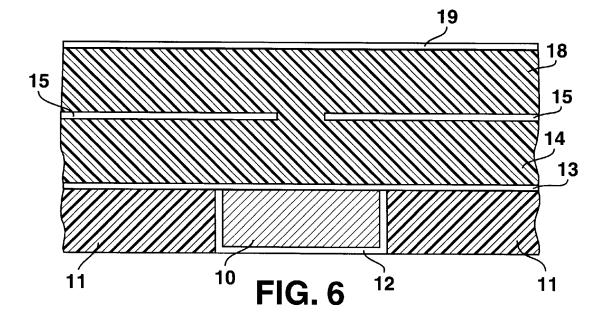




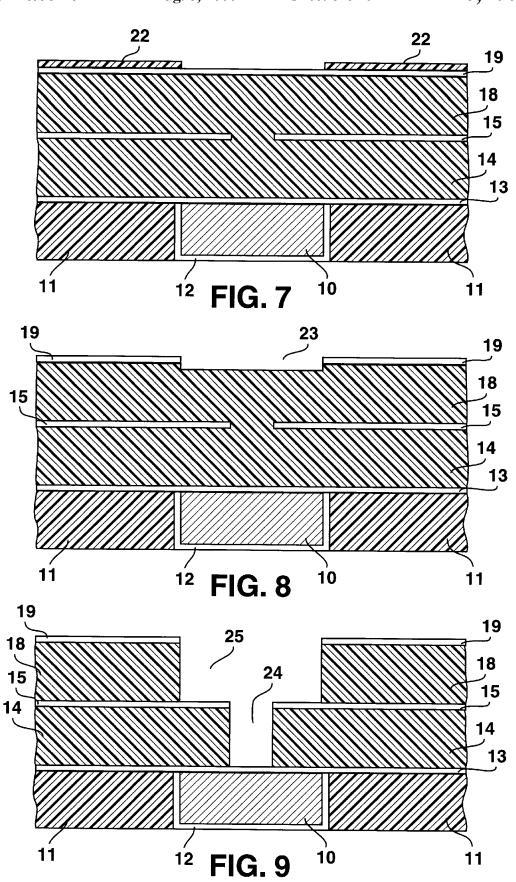




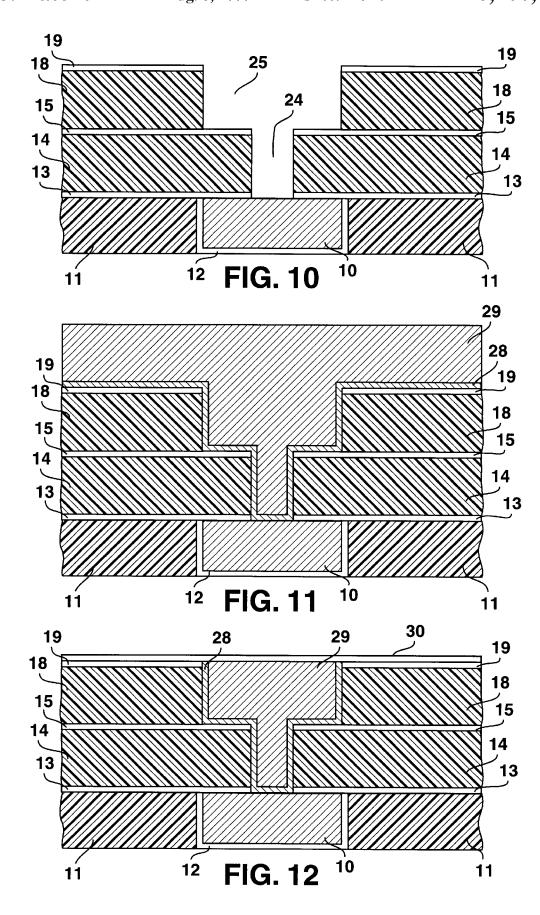












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