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(54) Title: ULTAVIOLET CURING PROCESSES FOR ADVANCED LOW-K MATERIALS

(57) Abstract: Low dielectric constant materials with improved elastic modulus and material hardness. The process of making such materials involves providing a dielectric material and ultraviolet (UV) curing the material to produce a UV cured dielectric material. UV curing yields a material with improved modulus and material hardness. The improvement is each typically greater than or about 50 %. The UV cured dielectric material can optionally be post-UV treated. The post-UV treatment reduces the dielectric constant of the material while maintaining an improved elastic modulus and material hardness as compared to the LIV cured dielectric material. UV cured dielectrics can additionally exhibit a lower total thermal budget for curing than for furnace curing processes.

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B05D3/06 H01L21/312 H01L21/314 H01L21/324 C23C16/40
C04B41/46 C04B41/50 C09D183/02 C09D183/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H01L C09D B05D C23C C04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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[X] Further documents are listed in the continuation of box C.

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European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Klopfenstein, P

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