

Title (en)
SLURRY FOR CHEMICAL-MECHANICAL POLISHING METAL SURFACES

Title (de)
AUFSCHLÄMMUNG ZUM CHEMISCH-MECHANISCHEN POLIEREN VON METALLISCHEN OBERFLÄCHEN

Title (fr)
PATE SERVANT A EFFECTUER LE POLISSAGE CHIMIOMECHANIQUE DE SURFACES METALLIQUES

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Application
EP 99916387 A 19990405

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Abstract (en)
[origin: WO9953532A1] The present invention provides a slurry for chemical-mechanical polishing metal surfaces which significantly increases the removal rate and is capable of polishing metals which are inert to most common oxidizing agents. The slurry is particularly useful for polishing metal layers on semiconductor wafer substrates. The slurry includes water, abrasive particles, and an oxidizing solution. In one preferred embodiment, the oxidizing solution comprises one or more water soluble peroxides, one or more amino acids, and one or more metals and/or compounds containing metals selected from the group consisting of chromium, cobalt, copper, iron, lead, nickel, palladium, rhodium, samarium, and scandium, with copper being preferred. In another preferred embodiment, the oxidizing solution comprises one or more water soluble peroxides, one or more organic amines, and optionally one or more metals and/or compounds containing metals.

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CPC (source: EP KR)
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Citation (search report)

- [X] US 5575885 A 19961119 - HIRABAYASHI HIDEAKI [JP], et al
- [PX] US 5770095 A 19980623 - SASAKI YASUTAKA [JP], et al
- [PX] US 5783489 A 19980721 - KAUFMAN VLASTA BRUSIC [US], et al
- [PX] EP 0846742 A2 19980610 - CABOT CORP [US]
- See references of WO 9953532A1

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