UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD
MICRON TECHNOLOGY, INC., INTEL CORPORATION,
AND GLOBALFOUNDRIES U.S., INC. Petitioners
SAMSUNG ELECTRONICS COMPANY, LTD.
<u>Petitioner</u>
V.
DANIEL L. FLAMM
Patent Owner
Case IPR. No. Unassigned U.S. Patent No. 5 711 849



Petition for *Inter Partes* Review of U.S. Patent No. 5,711,849 Under 35 U.S.C. §§ 311-319 and 37 C.F.R. §§ 42.1-.80, 42.100-.123

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	9.1 Claim 1 is obvious over Alkire in view of Galewski	2 -1
	9.1.1 [1.P] "A device fabrication method comprising the steps of:"	24 24
	9.1.2 [1.1] "providing a plasma etching apparatus comprising a substrate therein said substrate comprising a top surface	



		and a film overlying said top surface, said film comprising a top film surface;"	25
	9.1.3	[1.2] "etching said top film surface to define a relatively non-uniform etching profile on said film, and defining etch rate data comprising an etch rate and a spatial coordinate which defines a position within said relatively non-uniform etching profile on said substrate, said etching comprising a reaction between a gas phase etchant and said film; and"	2 6
		[1.3] "extracting a surface reaction rate constant from said etch rate data, and using said surface reaction rate constant in the fabrication of a device."	29
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		[10.P] "A method of designing a reactor comprising the steps of:"	35
		[10.1] "providing a first plasma etching apparatus comprising a substrate therein, said substrate comprising a top surface and a film overlying said top surface, said film comprising a top film surface"	36
		[10.2] "etching said top film surface to define a relatively non-uniform etching profile on said film, and defining etch rate data comprising an etch rate and a spatial coordinate which defines a position within said relatively non-uniform etching profile on said film of said substrate, said etching comprising a reaction between a gas phase etchant and said film; and"	36
		[10.3] "extracting a surface reaction rate constant from said etch rate data, and using said surface reaction rate constant in designing a second plasma etching apparatus."	37
0.3		20 is obvious over Alkire in view of Galewski	37
9.3	9.3.1	[20.P] "A substrate fabrication method, using a plasma etching apparatus, said method comprising:"	
	9.3.2	[20.1] "providing a substrate selected from a group consisting of a semiconductor wafer, a plate, and a flat panel display, said substrate comprising a top surface:"	



	9.3.3	[20.2] "forming a film overlying said top surface, said film comprising a top film surface;"	38
	9.3.4	[20.3] "etching said top film surface to define a relatively non-uniform profile on said film, and defining etch rate data comprising an etch rate and a spatial coordinate which defines a position within said relatively non-uniform etching profile of said film on said substrate, said etching comprising a reaction between a gas phase etchant and said film; and"	38
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	9.4.2	[22.1] "providing a uniformity value and a surface reaction rate constant for an etching reaction, said etching reaction including a substrate and etchant species;"	4 0
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	9.5.2	[26.1] "providing a plasma etching apparatus comprising a substrate therein, said substrate comprising a top surface and a film overlying said top surface, said film comprising a top film surface"	44



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