UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS COMPANY, LTD. Petitioner

v.

DANIEL L. FLAMM Patent Owner

U.S. Patent No. 5,711,849

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 5,711,849

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	GALEWSKI			
	9.1	Claim 1 is obvious over Alkire in view of Galewski	31	
		9.1.1 [1.P] "A device fabrication method comprising the steps of:"	31	

	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;"
	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"
	9.1.4	[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."
9.2	Claim	10 is obvious over Alkire in view of Galewski45
	9.2.1	[10.P] "A method of designing a reactor comprising the steps of:"
	9.2.2	[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"
	9.2.3	[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"
	9.2.4	[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."
9.3	Claim	20 is obvious over Alkire in view of Galewski
	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;"	.48
	9.3.3	[20.2] "forming a film overlying said top surface, said film comprising a top film surface;"	.49
	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"	.50
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	9.4.1	[22.P] "A method of fabricating an integrated circuit device, using a plasma etching apparatus, said method comprising:"	.50
	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;"	.51
	9.4.3	[22.2] "defining etching parameters providing said uniformity value; and"	.52
	9.4.4	[22.3] "adjusting at least one of said etching parameters using said surface reaction rate constant to produce a selected etching rate"	.53
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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"	.57
	9.5.3	[26.2] "etching said top surface at a temperature 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 defined a position from 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"	.57
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