

***LAM RESEARCH CORP.,***  
Petitioner

**Demonstrative Exhibits**

*Inter Partes* Review Case Nos. IPR2015-01764 and 01768

U.S. Patent No. RE40,264E

October 11, 2016

**Morgan Chu**  
**Samuel Lu**

## Grounds For Institution IPR2015-01764

**On February 24, 2016, the Board instituted this IPR on the following grounds:**

**(1)** Whether claims 27, 28, 30, 33, 35–39, 42, 43, 45, 46, 49, 51–54, 66, 67, and 69 are unpatentable under 35 U.S.C. § 103(a) as having been obvious over the combined disclosures of Tegal, Matsumura, and Narita; and

**(2)** Whether claim 29 is unpatentable under 35 U.S.C. § 103(a) as having been obvious over the combined disclosures of Tegal, Matsumura, Narita, and Ooshio.

## Grounds For Institution IPR2015-01768

**On February 24, 2016, the Board instituted this IPR on the following grounds:**

- (1)** Whether claims 56–58 are obvious over Tegal, Matsumura, Narita, Thomas, and Wang '485 under 35 U.S.C. § 103(a);
- (2)** Whether claims 60, 62, 63, and 71 are obvious over Tegal, Matsumura, Narita, Thomas, and Fischl under 35 U.S.C. § 103(a);
- (3)** Whether claims 51, 55, and 68 are obvious over Tegal, Matsumura, Narita, and Thomas under 35 U.S.C. § 103(a);
- (4)** Whether claims 56 and 59 are obvious over Tegal, Matsumura, Narita, Wang '391, Thomas, and Wang '485 under 35 U.S.C. § 103(a);
- (5)** Whether claim 61 is obvious over Tegal, Matsumura, Narita, Thomas, Fischl, and Ooshio under 35 U.S.C. § 103(a); and
- (6)** Whether claim 70 is obvious over Tegal, Matsumura, Narita, Thomas, Fischl, and Hwang under 35 U.S.C. § 103(a).

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# The Purported Invention

## The technology at issue relates to etching a substrate such as a semiconductor

US00RE40264E

(19) United States  
(12) Reissued Patent  
Flamm

(10) Patent Number: US RE40,264 E  
(45) Date of Reissued Patent: Apr. 29, 2008

(54) MULTI-TEMPERATURE PROCESSING

(76) Inventor: Daniel L. Flamm, 476 Green View Dr., Walnut Creek, CA (US) 94596

(21) Appl. No.: 10/439,245  
(22) Filed: May 14, 2003

Related U.S. Patent Documents

Reissue of:  
(64) Patent No.: 6,231,776  
Issued: May 15, 2001  
Appl. No.: 09/151,163  
Filed: Sep. 10, 1998

U.S. Applications:  
(63) Continuation-in-part of Application No. 08/567,224, filed on Dec. 4, 1995, now abandoned  
(60) Provisional application No. 60/058,650, filed on Sep. 11, 1997

(51) Int. Cl. H05H 1/011  
(52) U.S. C. 118/500  
(58) Field of Invention: Etching of a substrate  
See application Ser. No. 10/439,245, filed May 14, 2003, and Ser. No. 10/439,245, filed May 14, 2003, for a description of the invention.

(56) References Cited

5,179,266 A	3/1994	Carman et al.	219-385	processes that use the sequential thermal transfer of the substrate holder allows for a change from a first temperature to a second temperature within a characteristic time period to process a film. The present technique can, for example, provide different processing temperatures during an etching process or the like.
5,294,778 A	6/1994	Tarbone et al.	429-714	
5,320,982 A	9/1994	Tarbone et al.	374-161	
5,556,204 A	11/1996	Ishii et al.	156-345	
5,571,366 A	3/1997	Lenz et al.	438-715	
5,609,720 A	7/1997	Myamoto et al.	156-643.1	
5,645,683 A	9/1997	Holland et al.	216-13	
5,667,631 A	12/1997	Inahashi	118-719	

59 Claims, 15 Drawing Sheets

plasma discharge. One aspect of the present technique relies upon multi-stage etching processes for selectively removing a film on a workpiece using differing temperatures. It

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