United States Patent [19]

Higashikawa et al.

[54] DRY ETCHING METHOD FOR ORGANIC MATERIAL LAYERS

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- [73] Assignee: Tokyo Shibaura Denki Kabushiki Kaisha, Kanagawa, Japan
- [21] Appl. No.: 552,254
- [22] Filed: Nov. 16, 1983

[30] Foreign Application Priority Data

- Mar. 8, 1983 [JP] Japan 58-37938
- [51] Int. Cl.³ B44C 1/22; C03C 15/00;
- C03C 25/06; B29C 17/08
- 204/192 E; 204/298; 252/79.1
- [58] Field of Search 156/643, 646, 655, 659.1, 156/668, 345; 204/164, 192 E, 298; 252/79.1; 427/38, 39, 43.1

[45] Date of Patent: Sep. 25, 1984

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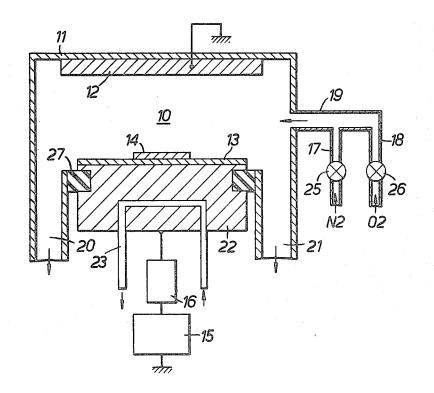
M. Hatzakis, "Multilayer Resist Systems for Lithography", *Solid State Technology*, Aug. 1981, pp. 74-80. J. Moran et al., "High Resolution, Steep Profile, Resist Patterns", The Bell System Technical Journal, vol. 58, No. 5, May-Jun. 1979, pp. 1026-1036.

Primary Examiner—William A. Powell Attorney, Agent, or Firm—Banner, Birch, McKie & Beckett

ABSTRACT

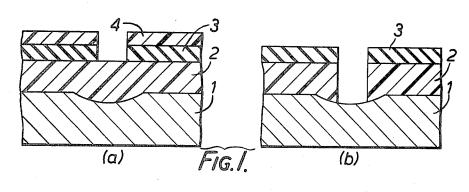
A dry etching method for organic material layers is disclosed which utilizes a parallel plate electrode type plasma etching apparatus. An etching gas containing nitrogen as its primary constituent is introduced into the apparatus, and then the organic material layers are anisotropically etched by applying a high frequency electric power to the electrodes to produce a plasma.

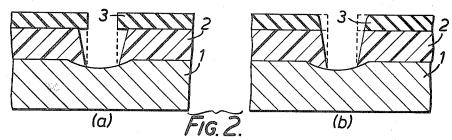
6 Claims, 8 Drawing Figures

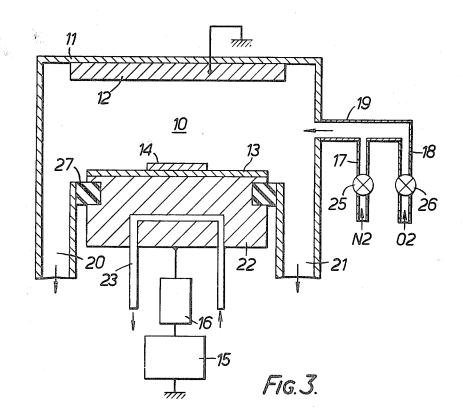


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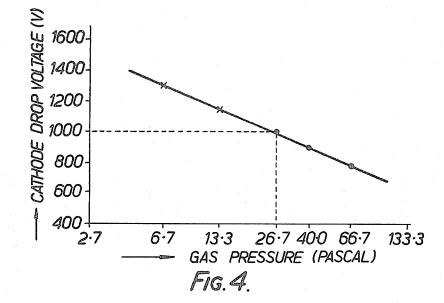
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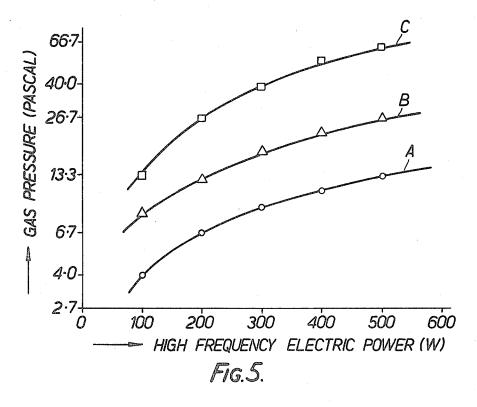






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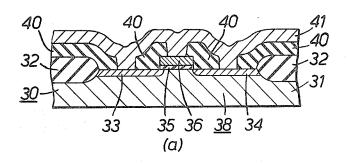


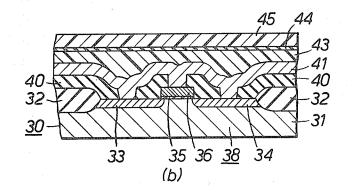
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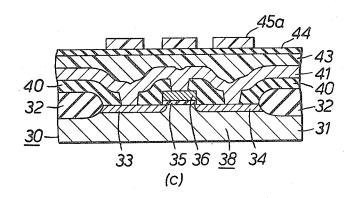
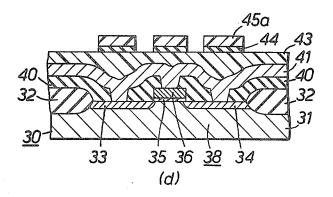
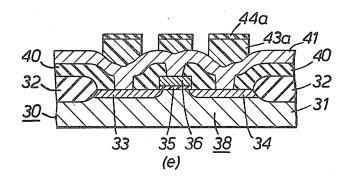
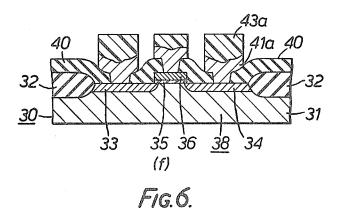


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