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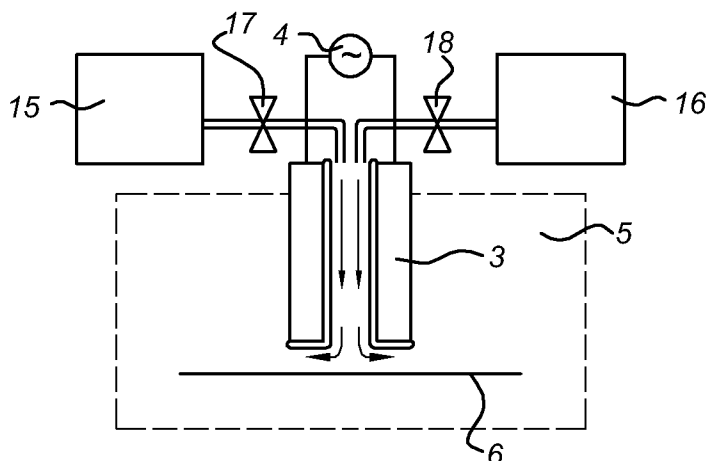
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Fig 5a



(57) Abstract: Apparatus and method for atomic layer deposition on a surface of a substrate (6) in a treatment space. A gas supply device (15, 16) is present for providing various gas mixtures to the treatment space (1, 2). The gas supply device (15, 16) is arranged to provide a gas mixture with a precursor material to the treatment space for allowing reactive surface sites to react with precursor material molecules to give a surface covered by a monolayer of precursor molecules attached via the reactive sites to the surface of the substrate. Subsequently, a gas mixture comprising a reactive agent capable to convert the attached precursor molecules to active precursor sites is provided. A plasma generator (10) is present for generating an atmospheric pressure plasma in the gas mixture comprising the reactive agent, the plasma generator being arranged remote from the treatment space (1, 2).

INTERNATIONAL SEARCH REPORT

International application No

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A. CLASSIFICATION OF SUBJECT MATTER
 INV. C23C16/02 C23C16/455

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 C23C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	J00-HYEON LEE ET AL: "Investigation of silicon oxide thin films prepared by atomic layer deposition using SiH ₂ Cl ₂ and O ₃ as the precursors" JAPANESE JOURNAL OF APPLIED PHYSICS, PART 2 (LETTERS) JAPAN SOC. APPL. PHYS JAPAN, vol. 43, no. 3A, 1 March 2004 (2004-03-01), pages L328-L330, XP002468827 ISSN: 0021-4922 page L328, right-hand column, paragraph 3 - page L329, left-hand column, paragraph 3	1,3-5
Y	US 2005/084610 A1 (SELITSER SIMON I [US]) 21 April 2005 (2005-04-21) cited in the application	1-20
X	paragraphs [0039], [0046]; claims; figures ----- -/--	21-37

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Y	US 2003/114018 A1 (GUTSCHE MARTIN [DE] ET AL) 19 June 2003 (2003-06-19) paragraphs [0048] - [0053] -----	1-20
A	US 2005/172897 A1 (JANSEN FRANK [US]) 11 August 2005 (2005-08-11) figure; example -----	2,14,26, 27,34-37
A	LANGEREIS E ET AL: "Plasma-assisted atomic layer deposition of Al ₂ O ₃ moisture permeation barriers on polymers" APPLIED PHYSICS LETTERS, AIP, AMERICAN INSTITUTE OF PHYSICS, MELVILLE, NY, US, vol. 89, no. 8, 25 August 2006 (2006-08-25), pages 81915-81915, XP012088600 ISSN: 0003-6951 pages 81915-1, right-hand column, paragraphs 1,2 -----	2,34-37

INTERNATIONAL SEARCH REPORT

Information on patent family members

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