A new apparatus for processing substrates is disclosed. A multi-level load lock chamber (10) having four environmentally isolated chambers interfaces with a transfer chamber (400) that has a robotic assembly (600). The robotic assembly has two arms (618) that each move horizontally as the robotic assembly rotates about its axis. The arms each reach into the isolated chambers of the load lock to receive substrates from the bottom isolated chamber, transport the substrates to process chambers, and then place the substrates in the upper chambers. The isolated chambers in the load lock chamber have a pivotally attached lid that may be opened to access the inside of the isolated chambers.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC: H01L 21/311 (2006.01)
USPC: 414/217
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)
U.S.: 414/217,937
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 practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 6,074,443 A (Venkatesh et al.) 13 June 2000 (13.06.2000) entire document.</td>
<td>1,2 and 12-14</td>
</tr>
<tr>
<td>Y</td>
<td>US 2004/0137741 A1 (Chebi et al.) entire document.</td>
<td>3,4 and 10</td>
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</tbody>
</table>

Further documents are listed in the continuation of Box C. See patent family annex.

Date of the actual completion of the international search: 11 August 2008 (11.08.2008)
Date of mailing of the international search report: 14 Aug 2008

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