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(54) Title: ELECTRON BEAM INDUCED RESONANCE

(57) Abstract: We describe an ultra-small structure that produces visible light of varying frequency, from a single metallic layer. In one example, a row of metallic posts are etched or plated on a substrate according to a particular geometry. When a charged particle beam passed close by the row of posts, the posts and cavities between them cooperate to resonate and produce radiation in the visible spectrum (or even higher). A plurality of such rows of different geometries can be etched or plated from a single metal layer such that the charged particle beam will yield different visible light frequencies (i.e., different colors) using different ones of the rows.

INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER
 IPC: H01J 25/50(2006.01);A61N 5/06(2006.01)

USPC: 315/39.51;250/504R
 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. : 315/39.51; 250/504R

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

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2006/0243925 A1 (Barker et al.) 02 November 2006 (02.11.2008), figures 3, 7-8	1-22
X	US 6,525,477 B2 (Small) 25 February 2003 (25.02.2003), figure 10	1-22

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

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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