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(71) Applicants: **INPRIA CORPORATION** [US/US]; 1100 NE Circle Blvd., Suite 360, CORVALLIS, Oregon 97330 (US). **TOKYO ELECTRON LTD.** [JP/JP]; Akasaka Biz Tower, 3-1 Akasaka 5-chome, Minato-ku, Tokyo, 107-6325 (JP).

(72) Inventors: **CARDINEAU, Brian J.**; 1504 NW Woodland Drive, CORVALLIS, Oregon 97330 (US). **DE SCHEPPER, Peter**; Kasteellei 84, 2110 WIJNEGEM (BE).

(74) Agent: **DARDI, Peter S.**; CHRISTENSEN, FONDER, DARDI & HERBERT PLLC, 11322 86th Avenue North, MAPLE GROVE, Minnesota 55369 (US).

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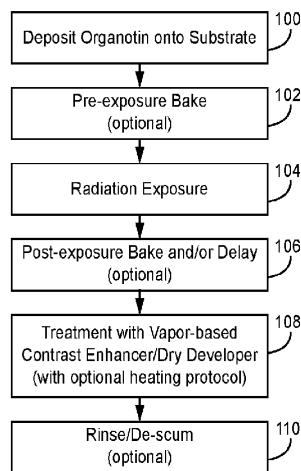


FIG. 1

(57) Abstract: Patterning of organometallic radiation sensitive compositions is facilitated using a gaseous form of a contrast enhancing agent, which can include a carboxylic acid, an amide, a sulfonic acid, an alcohol, a diol, a silyl halide, a germanium halide, a tin halide, an amine, a thiol, or a mixture thereof, in which the mixture can be of the same class or different class of compounds. Contact with the contrast enhancing reactive compound is provided after irradiation of the organometallic composition to form a latent image. The contrast enhancing agent can be delivered before or after physical pattern development, and processing with the contrast enhancing agent can involve removal in a thermal process of some or substantially all of the non-irradiated organometallic composition. The contrast enhancing agent can be used in a dry thermal development step. If the contrast enhancing agent is used after a distinct development step, use of the contrast enhancing agent can involve improvement of the pattern quality. Apparatuses for performing processing with contrast enhancing agents are described.

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