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(54) **LPP EUV LIGHT SOURCE DRIVE LASER SYSTEM**

**Publication Classification**

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(57) **ABSTRACT**

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An apparatus and method is disclosed which may comprise a laser produced plasma EUV system which may comprise a drive laser producing a drive laser beam; a drive laser beam first path having a first axis; a drive laser redirecting mechanism transferring the drive laser beam from the first path to a second path, the second path having a second axis; an EUV collector optical element having a centrally located aperture; and a focusing mirror in the second path and positioned within the aperture and focusing the drive laser beam onto a plasma initiation site located along the second axis. The apparatus and method may comprise the drive laser beam is produced by a drive laser having a wavelength such that focusing on an EUV target droplet of less than about 100 μm at an effective plasma producing energy if not practical in the constraints of the geometries involved utilizing a focusing lens. The drive laser may comprise a CO<sub>2</sub> laser. The drive laser redirecting mechanism may comprise a mirror.

(73) Assignee: **Cymer, Inc.**, San Diego, CA

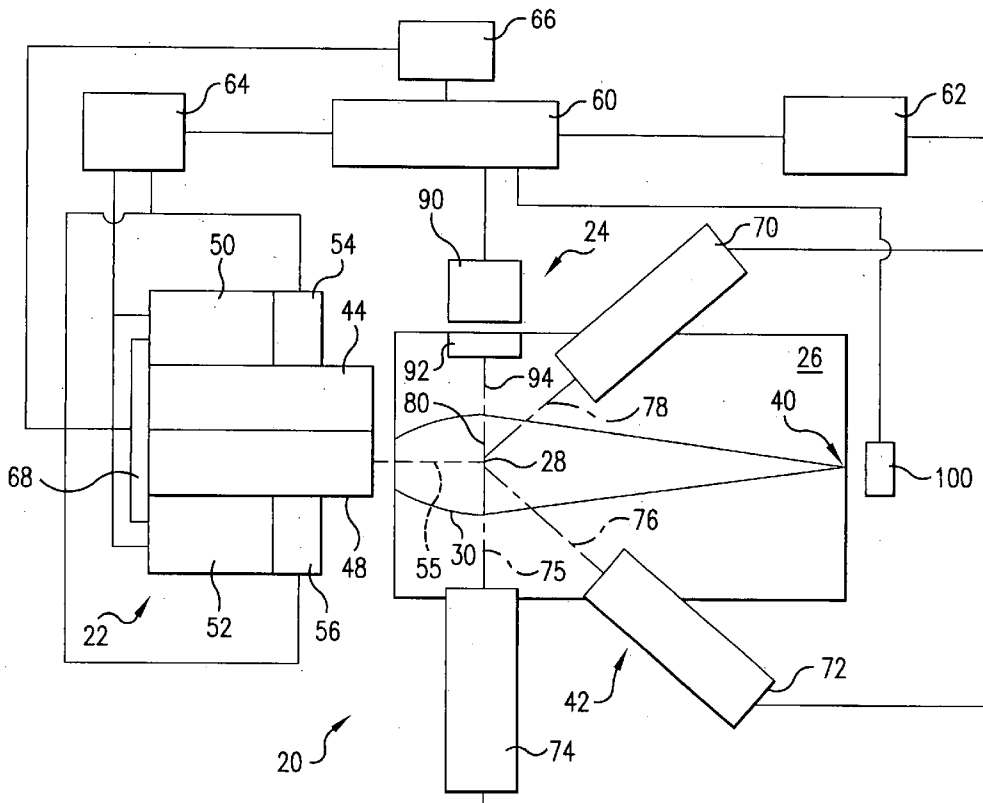
(21) Appl. No.: **11/217,161**

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**Related U.S. Application Data**

(63) Continuation-in-part of application No. 11/174,299, filed on Jun. 29, 2005.

(60) Provisional application No. 60/657,606, filed on Feb. 28, 2005.



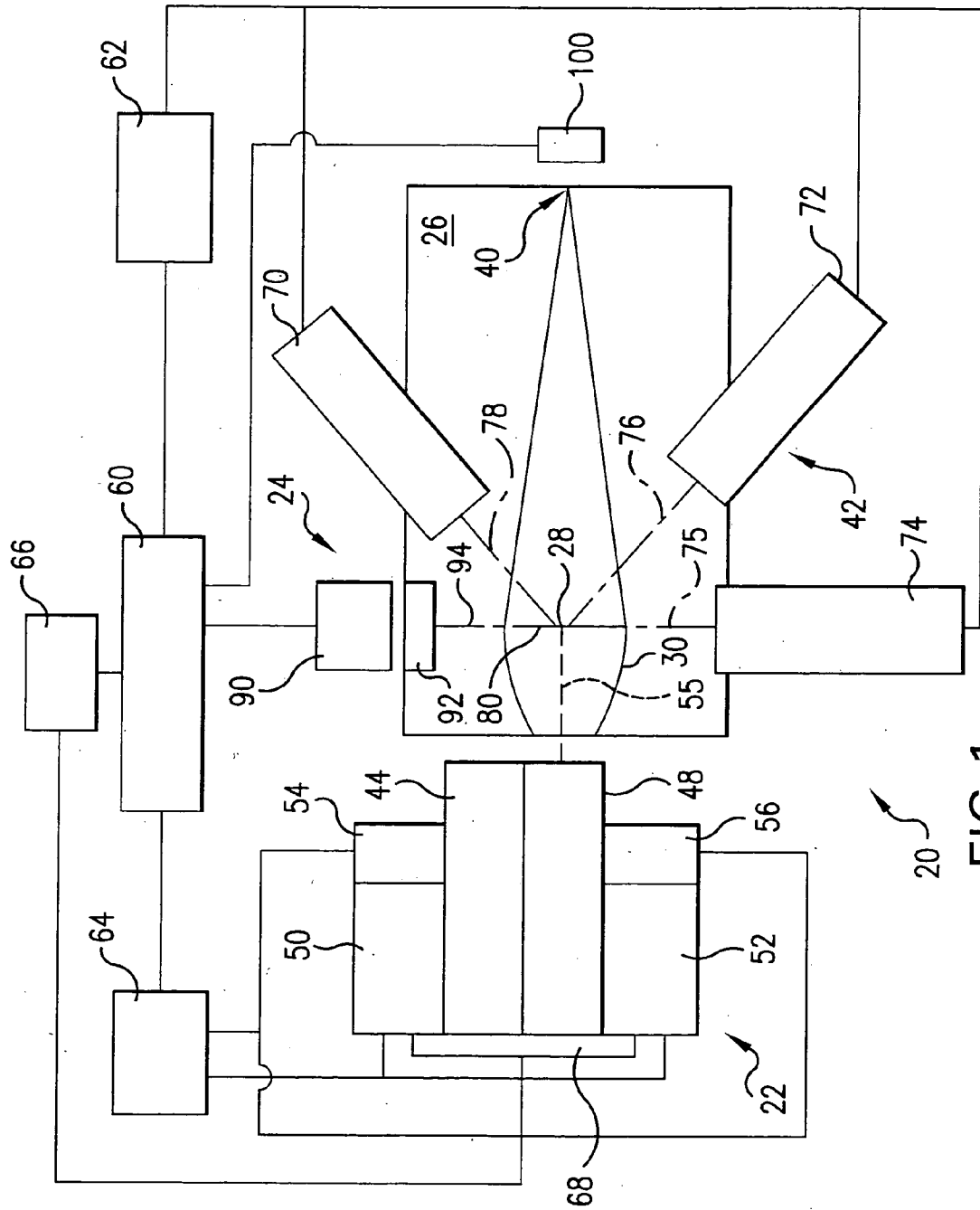


FIG. 1

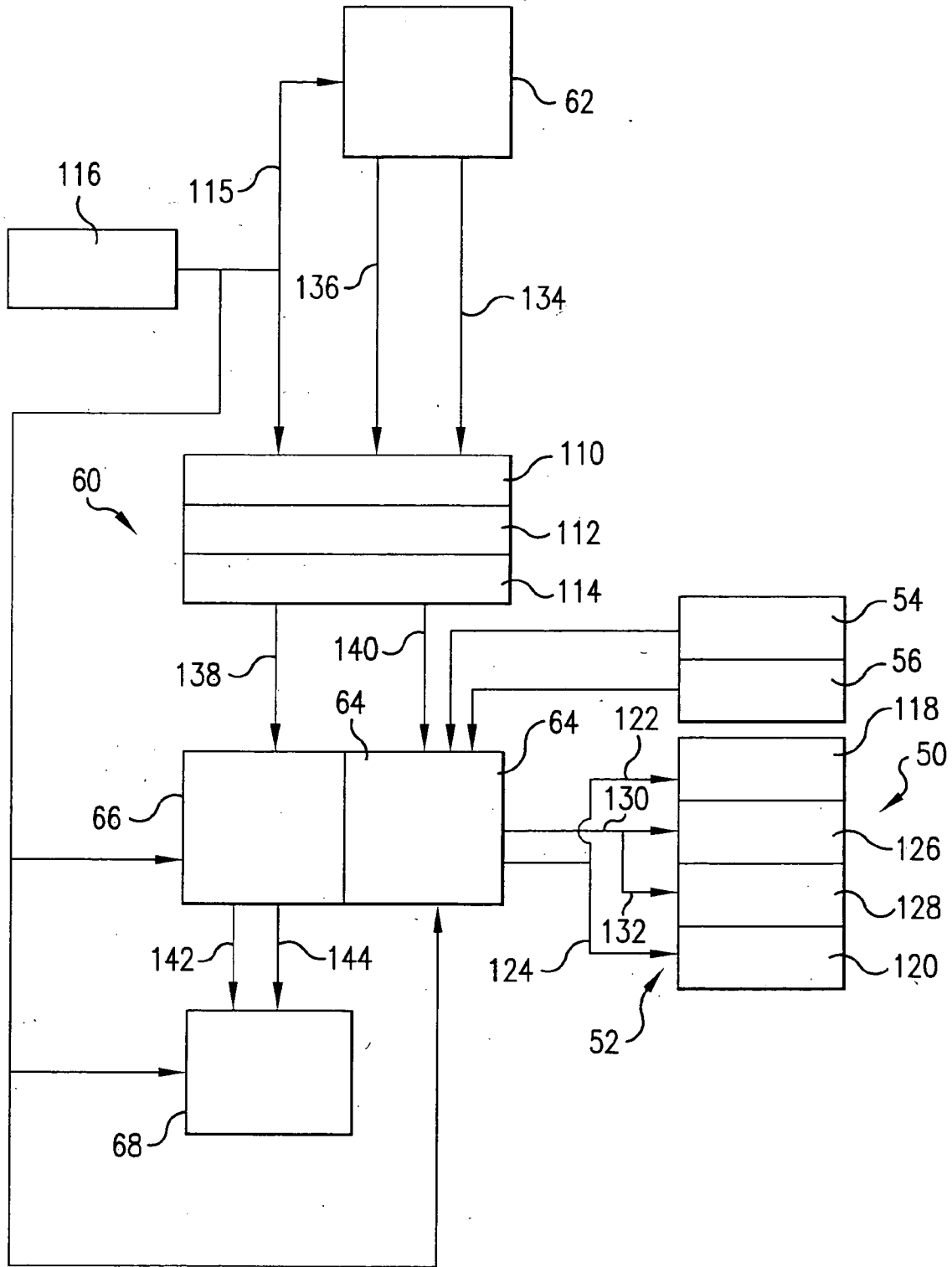


FIG. 2

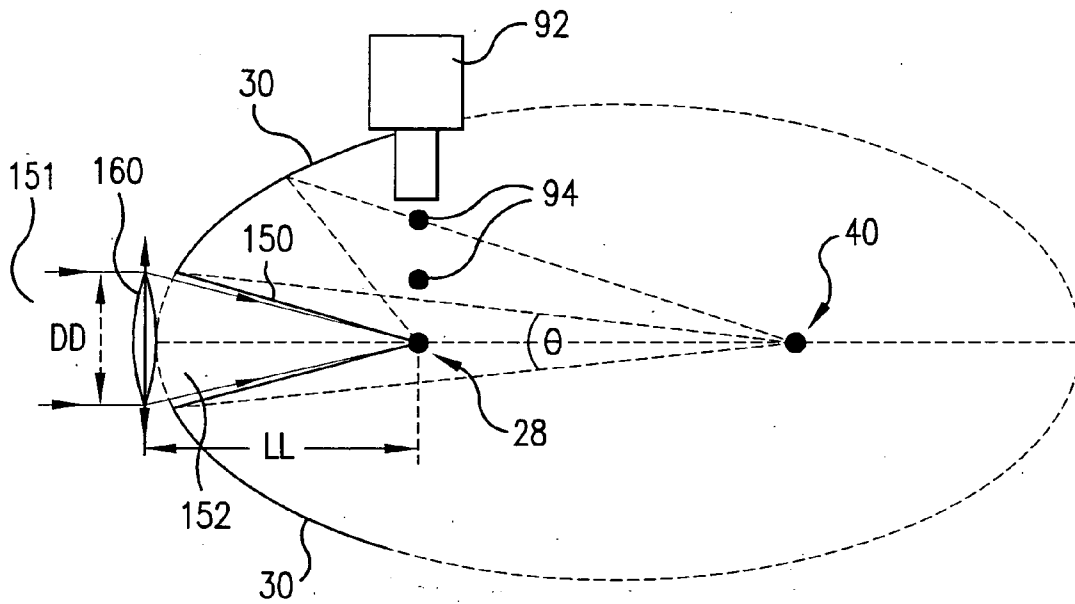


FIG. 3

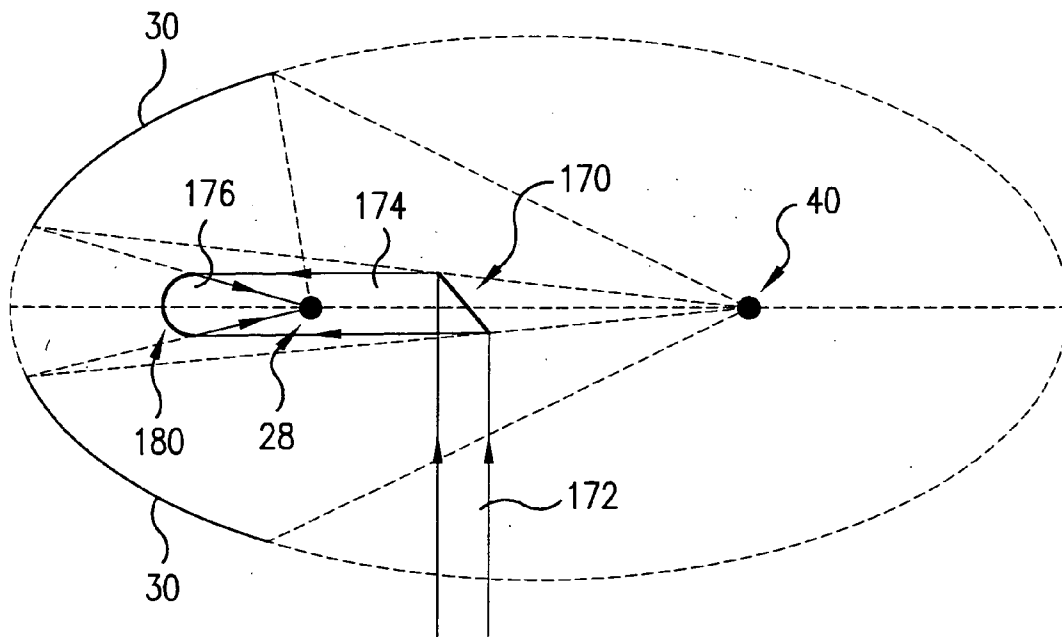


FIG. 4

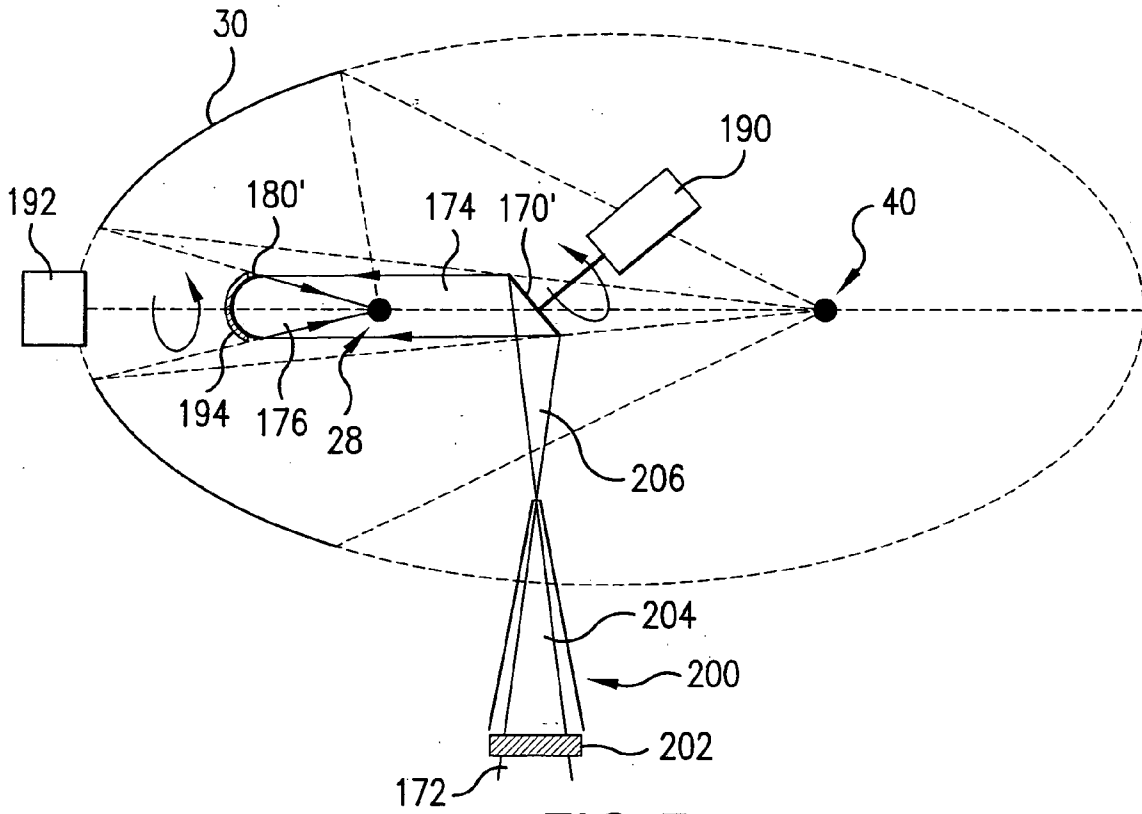


FIG. 5

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