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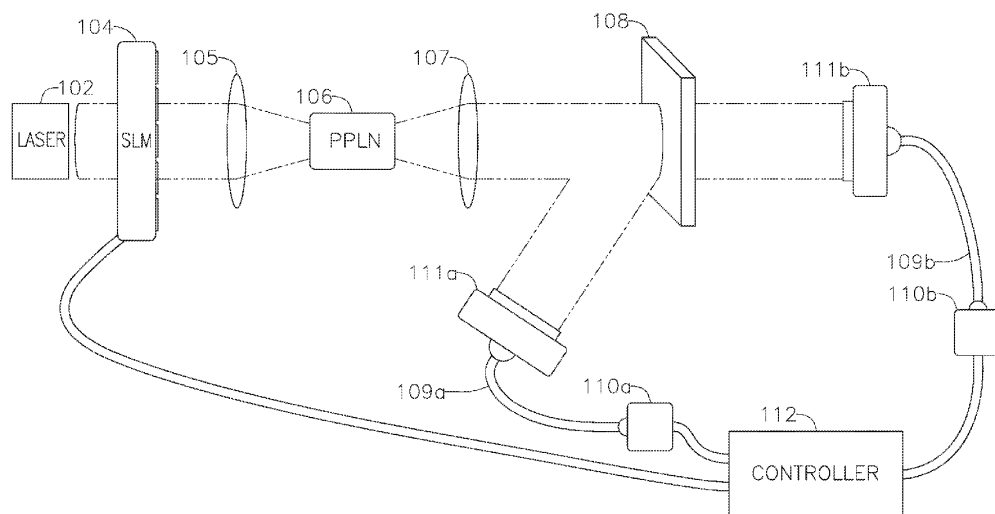
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(54) Title: SUPER ISING EMULATOR WITH MULTI-BODY INTERACTIONS AND ALL-TO-ALL CONNECTIONS

FIG. 1



(57) Abstract: An optical computation system includes a light source configured to produce a pump beam, an optical modulator configured to modulate the pump beam based on the modulation mask to generate a modulated beam, a non-linear medium configured to convert a portion of the modulated beam to a second harmonic (SH) beam and to produce an output including the SH beam and an unconverted portion of the pump beam, and a dichroic mirror configured to receive the output of the non-linear medium and to decouple the SH beam and the unconverted portion of the pump beam, a detector configured to detect a first optical power of the unconverted portion of the pump beam and to detect a second optical power of the SH beam, and a controller configured to generate an updated modulation mask based on the first and second optical powers for transmission to the optical modulator.

[Continued on next page]

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