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Yang et al.

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(54) **SOFT ACTUATORS AND SOFT ACTUATING DEVICES**

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See application file for complete search history.

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(57) **ABSTRACT**

A soft buckling linear actuator is described, including: a plurality of substantially parallel bucklable, elastic structural components each having its longest dimension along a first axis; and a plurality of secondary structural components each disposed between and bridging two adjacent bucklable, elastic structural components; wherein every two adjacent bucklable, elastic structural components and the secondary structural components in-between define a layer comprising a plurality of cells each capable of being connected with a fluid inflation or deflation source; the secondary structural components from two adjacent layers are not aligned along a second axis perpendicular to the first axis; and the secondary structural components are configured not to buckle, the bucklable, elastic structural components are configured to buckle along the second axis to generate a linear force,

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