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(54) **CONTROLLING CHEMICAL REACTIONS BY SPECTRAL CHEMISTRY AND SPECTRAL CONDITIONING**

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**C07C 1/00** (2006.01)

(52) **U.S. Cl.** ..... **204/157.15**

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See application file for complete search history.

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(57) **ABSTRACT**

This invention relates to novel methods for affecting, controlling and/or directing various reactions and/or reaction pathways or systems by exposing one or more components in a holoreaction system to at least one spectral energy pattern. In a first aspect of the invention, at least one spectral energy pattern can be applied to a reaction system. In a second aspect of the invention, at least one spectral energy conditioning pattern can be applied to a conditioning reaction system. The spectral energy conditioning pattern can, for example, be applied at a separate location from the reaction vessel (e.g., in a conditioning reaction vessel) or can be applied in (or to) the reaction vessel, but prior to other reaction system participants being introduced into the reaction vessel.

**7 Claims, 69 Drawing Sheets**

