What is claimed is:

1. A system for generating fuel stocks comprising a plurality of assembled zones, fabricated by stacking, or laterally arranging, prefabricated modules,

wherein said prefabricated modules form a biocolumn, said biocolumn comprised of an aerobic zone, a microaerophilic zone, an oxidizing zone, a redox microtransition zone, and a reducing zone;

wherein each zone is connected with the preceding and subsequent zones to allow communication, exchange of nutrients, and symbiotic consumption between species from different zones; and

wherein one or more of a nutrient, a renewable energy source, photon energy or a carbon source can be added into a zone and one or more of a fuel stock or by-product can be removed.

2. The system for generating fuel stocks according to claim 1, wherein each module can further be divided into submodules.

3. The system for generating fuel stocks according to claim 1, wherein photon energy is obtained from one or more submerged light emitting diode (LED) lights.

4. The system for generating fuel stocks according to claim 1, wherein said renewable energy source is geothermal energy, solar thermal energy, photovoltaic energy, external waste heat, heat from internal reactions or combination thereof.

5. The system for generating fuel stocks according to claim 1, wherein said nutrient is a geothermal fluid, an organic waste slurry biomass, a coal, a hydrocarbon or combination thereof.

6. The system for generating fuel stocks according to claim 1 or 5 wherein said nutrient is water containing.

7. The system for generating fuel stocks according to claim 1, wherein said carbon source is atmospheric air, a carbon dioxide source, an organic waste, a coal, a hydrocarbon, a geothermal fluid, an internal product of consortium growth, propagation and reaction or combination thereof.

8. The system for generating fuel stocks according to claim 3, wherein said one or more submerged light emitting diode (LED) lights operate below the normal intensity of sunlight ~~and deliver only narrow bands of light with the frequencies that the resident algae are capable of accepting~~ so that algae growth plateaus.

9. The system for generating fuel stocks according to claim 3, wherein said one or more submerged light emitting diode (LED) lights are pulsed to allow algae to recover from the acceptance of a photon.

10. The system for generating fuel stocks according to claim 3, wherein light emitting diode (LED) light fixtures are mounted on distributing tubes that provide nutrient input to sweep the LED lenses and prevent growth buildup from blocking the light.

11. A method for fabricating a biocolumn comprising the steps of:
    a) providing a plurality of individual prefabricated modules, wherein each prefabricated module includes at least one inlet and at least one outlet;
    b) assembling said plurality of prefabricated modules together by stacking or laterally arranging them with one another to form a biocolumn; wherein said biocolumn comprised of an aerobic zone, a microaerophilic zone, an oxidizing zone, a redox microtransition zone, and a reducing zone;
    c) creating a biomass by adding to each of said prefabricated modules a solution containing one or more of an algae, cyanobacteria, heterotroph, nitrifier, sulfur oxidizer, methane oxidizer, denitrifier, sulfate reducer, iron oxidizer, anaerobic photoanitotroph, anaerobic chemoautotroph, ~~ferementor~~fermenter, methogen or iron reducer;

d) adding at least one of a source of nutrient, a source of heat or a source of light to each of said prefabricated modules;
e) connecting said prefabricated modules to one another using said at least one inlet and said at least one outlet;
f) allowing said biomass to metabolize one or more sources of carbon;
g) removing one or more salable materials from one or more prefabricated modules.

12. The method of claim 11 wherein each module can further be divided into submodules, each having at least one inlet and at least one outlet.

13. The method of claim 11 wherein said light source is one or more submerged light emitting diode (LED) lights.

14. The method of claim 11 wherein said nutrient is a geothermal fluid, an organic waste slurry biomass, a coal, a hydrocarbon or a combination thereof.