10. The apparatus of claim 9, further comprising interposing a thermal interface between the collecting surface of a radiation-emitting layer and the inner surface of the thermally-conductive shell.

11. The apparatus of claim 9, further comprising a thermal interface between a high-temperature housing and a hot-side emitter comprised of thermally conductive graphite.

12. The apparatus of claim 9, wherein a vacuum is maintained between the emitting surface and the receiving surface.

13. The apparatus of claim 9, wherein a vacuum is maintained within the shell.

14. The apparatus of claim 9, further comprising thermally insulated spacers for maintaining the distance between the receiving surface of the photovoltaic cell and the emitting surface of the radiation-emitting layer.

~~15. An apparatus for converting heat energy to electric power using sub-micron gap thermo-photovoltaic technology, comprising a shell for enclosing the components of a module, including:~~

~~an emitter chip array maintained in close thermal contact with the shell via a thermal interface;~~

a membrane and photovoltaic subassembly spaced apart from the emitter chip array by thermally insulated spacers;

a liquid metal chamber in contact with the membrane for maintaining the emitter chip array in thermal contact with the shell;

a heat sink subassembly for accepting liquid coolant for cooling the membrane, the liquid metal chamber and the photovoltaic subassembly;

a water distribution housing for distributing liquid coolant to the heat sink subassembly via a bellows subassembly;

a pneumatic subassembly for maintaining the heat sink in contact with the liquid metal chamber and photovoltaic subassembly; and

a pressure actuator for maintaining pressure in the pneumatic subassembly.

16. The apparatus of claim 15, wherein a vacuum is maintained within the shell.

17. The apparatus of claim 15, wherein the module contains a multiplicity of photovoltaic and emitter chip arrays.

18. The apparatus of claim 15, wherein the shell comprises an *M x N* array of modules, where *M* and *N* are greater than or equal to one.

19. The apparatus of claim 15, further comprising a cooling control module, a vacuum control module and a pneumatic pressure control module.

15. An apparatus for converting heat energy to electric power using sub-micron gap thermo thermal photovoltaic technology, comprising a shell for enclosing the components of a quad module, including:

an emitter chip array maintained in close thermal contact with the shell via a thermal interface;

a membrane and photovoltaic subassembly spaced apart from the emitter chip array by thermally insulated spacers;

a liquid metal chamber in contact with the membrane for maintaining the emitter chip array maintained in close thermal contact with the shell;

a heat sink subassembly for accepting a liquid coolant for cooling the membrane, the liquid metal chamber and the photovoltaic subassembly;

a water distribution housing for distributing the liquid coolant to a coolant input on the heat sink subassembly via an input bellows subassembly and accepting the liquid coolant from a coolant output on the heat sink subassembly via an output bellows subassembly, the input bellows subassembly being positioned separately from the output bellows subassembly on the heat sink subassembly;

the input and output bellows subassemblies for enabling thermal expansion and contraction of the shell and for forcing the heat sink subassembly toward the shell;

a pneumatic subassembly for maintaining the heat sink subassembly in close contact with the liquid metal chamber and photovoltaic subassembly; and

a pressure regulator positioned separately from the pneumatic subassembly for maintaining pressure in the pneumatic subassembly.

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16. The apparatus of claim 15, wherein a vacuum is maintained within the shell.

17. The apparatus of claim 15, wherein the quad module contains a multiplicity of photovoltaic cells and emitter chip arrays.

18. The apparatus of claim 15, wherein the shell comprises an $M x N$ array of quad modules, where M and N are greater than or equal to one.

19. The apparatus of claim 15, further comprising a cooling control module, a vacuum control module and a pneumatic pressure control module.

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