CLAIMS

1. An autonomous refueling vehicle for a hydrogen-electric aircraft, wherein the hydrogen-electric aircraft comprises
- at least two wings, and
- at least one removable electric propulsion pod that is attached to one of the two wings, the at least one removable electric propulsion pod comprising
    - a body that comprises a hydrogen refueling interface for receiving hydrogen, and
    - a lock and unlock mechanism being adapted to removably attach the body to one of the two wings,

the autonomous refueling vehicle comprising
- a hydrogen refueling module being adapted to connect to the hydrogen refueling interface and to a hydrogen source, and
- a propulsion pod handling device being adapted to activate the lock and unlock mechanism to remove the at least one removable electric propulsion pod from one of the two wings, and to position the at least one removable electric propulsion pod on the hydrogen refueling module such that the hydrogen refueling interface is connected to the hydrogen refueling module,

wherein the autonomous refueling vehicle is adapted to autonomously move itself to the hydrogen source to allow the hydrogen refueling module to removably connect to the hydrogen source for refueling of the removable electric propulsion pod~~.~~,

~~2. The autonomous refueling vehicle according to claim 1, wherein the propulsion pod handling device is further adapted to attach the at least one removable electric propulsion pod to one of the two wings.~~

~~3. The autonomous refueling vehicle according to claim 1,~~ wherein the hydrogen refueling module comprises
- a hydrogen receiving interface being adapted to connect to the hydrogen source,
- a chamber being connected to the hydrogen receiving interface, and

- a plurality of recesses with hydrogen discharge ports, the hydrogen discharge ports being connected to the chamber,
wherein each recess is adapted to receive the at least one removable electric propulsion pod for allowing the hydrogen discharge port to be connected to the hydrogen refueling interface of the at least one removable electric propulsion pod.

~~4~~2. The autonomous refueling vehicle according to claim 1, wherein the propulsion pod handling device comprises at least one robotic arm with at least one robotic grasping mechanism, the robotic grasping mechanism being adapted to position the at least one removable electric propulsion pod on the hydrogen refueling module.

~~5~~3. The autonomous refueling vehicle according to claim 1, wherein the propulsion pod handling device comprises a hydrogen refueling module elevating assembly being adapted to vertically move the hydrogen refueling module towards and away from the at least one removable electric propulsion pod.

~~6~~4. The autonomous refueling vehicle according to claim ~~5~~3, wherein the propulsion pod handling device further comprises at least one lift and catch mechanism being adapted to attach the at least one removable electric propulsion pod to one of the two wings.

~~7~~5. The autonomous refueling vehicle according to claim 1, wherein the at least one autonomous refueling vehicle further comprises at least two wheels being adapted to move towards and away from the hydrogen-electric aircraft.

~~8~~6. The autonomous refueling vehicle according to claim ~~7~~5, wherein the at least one autonomous refueling vehicle further comprises a mono-directional steering mechanism being adapted to direct the at least two wheels to move in one direction.

~~9~~7. The autonomous refueling vehicle according to claim ~~7~~5, wherein the at least one autonomous refueling vehicle

further comprises a multi-directional steering mechanism being adapted to direct the at least two wheels to move in multiple directions.

~~10~~8. An autonomous hydrogen refueling infrastructure comprising
- an autonomous refueling vehicle according to claim 1, and
- a hydrogen source for providing hydrogen to the autonomous refueling vehicle.

~~11~~9. The autonomous hydrogen refueling infrastructure according to claim ~~10~~8, wherein the hydrogen source comprises an autonomous movable hydrogen supply tank.

~~12~~10. The autonomous hydrogen refueling infrastructure according to claim ~~11~~9, wherein the autonomous movable hydrogen supply tank comprises at least two wheels with a multi-directional steering mechanism being adapted to move in multiple directions.

~~13~~11. A hydrogen refueling system for aviation comprising
- a hydrogen-electric aircraft that comprises
    - at least two wings, and
    - at least one removable electric propulsion pod that is attached to one of the two wings, the at least one removable electric propulsion pod comprising
        - a body that comprises a hydrogen refueling interface for receiving hydrogen, and
        - a lock and unlock mechanism being adapted to removably attach the body to one of the two wings,
- an autonomous hydrogen refueling infrastructure according to claim 1.

~~14. An automated hydrogen refueling and storage assembly for at least one unmanned vehicle, the at least one unmanned vehicle comprises at least one hydrogen storage device, the automated hydrogen refueling and storage assembly comprising~~
~~- a hydrogen storage device handling unit,~~

~~- a movable landing platform being adapted to receive at least one landing unmanned vehicle and to move to a predetermined position,~~
~~wherein the hydrogen storage device handling unit is adapted to move near to the predetermined position and to receive the at least one hydrogen storage device from the at least one unmanned vehicle,~~
~~- a disposing storage unit being adapted to receive the at least one hydrogen storage device from the hydrogen storage device handling unit and to store the at least one hydrogen storage device,~~
~~- a hydrogen storage device storing unit for storing a plurality of hydrogen storage devices, the hydrogen storage device storing unit being adapted to transfer a hydrogen storage device from the plurality of the hydrogen storage devices to the hydrogen storage device handling unit, wherein the hydrogen storage device handling unit is further adapted to attach the hydrogen storage device to the at least one unmanned vehicle,~~
~~wherein the disposing storage unit and the hydrogen storage device storing unit are located inside and underneath the landing platform.~~

~~15. The automated hydrogen refueling and storage assembly according to claim 14, wherein~~
~~the hydrogen storage device handling unit is positioned adjacent to the disposing storage unit and the hydrogen storage device storing unit.~~

~~16. The automated hydrogen refueling and storage assembly according claim 14, wherein~~
~~the hydrogen storage device handling unit is positioned between the disposing storage unit and the hydrogen storage device storing unit.~~

~~17. The automated hydrogen refueling and storage assembly according to claim 14, wherein the hydrogen storage device storing unit comprises a hydrogen refueling unit being adapted to provide hydrogen to the plurality of the hydrogen storage devices.~~

~~18. The automated hydrogen refueling and storage assembly according to claim 14, wherein~~
~~the hydrogen storage device handling unit comprises a robotic arm with a grasping mechanism and with a locking/unlocking mechanism, the grasping mechanism and the locking/unlocking mechanism being adapted to work cooperatively to grasp the at least one hydrogen storage device from the at least one unmanned vehicle.~~

~~19. The automated hydrogen refueling and storage assembly according to claim 18, wherein~~
~~the grasping mechanism and the locking/unlocking mechanism are further adapted to work cooperatively to attach the at least one hydrogen storage device to the at least one unmanned vehicle.~~

~~20. The automated hydrogen refueling and storage assembly according to claim 14, wherein~~
~~the disposing storage unit comprises a first conveyer belt mechanism being adapted to transfer the at least one hydrogen storage device from the hydrogen storage device handling unit to the disposing storage unit.~~

~~21. The automated hydrogen refueling and storage assembly according to claim 14, wherein~~
~~the hydrogen storage device storing unit comprises a second conveyer belt mechanism being adapted to transfer the hydrogen storage devices to the hydrogen storage device handling unit.~~

~~22. The automated hydrogen refueling and storage assembly according to claim 14, wherein~~
~~the hydrogen storage device comprises a member that is selected from a group consisting of hydrogen cylinder, hydrogen cartridge, and hydrogen pods.~~

~~23. An automated hydrogen refueling and storage assembly for at least one unmanned vehicle, the at least one unmanned vehicle comprises at least one hydrogen storage device, the automated hydrogen refueling and storage assembly comprising~~
~~- a hydrogen storage device handling unit,~~

~~- a movable landing platform being adapted to receive at least one landing unmanned vehicle and to move to a predetermined position,~~
~~wherein the hydrogen storage device handling unit is adapted to move near to the predetermined position and to receive the at least one hydrogen storage device from the at least one unmanned vehicle,~~
~~- a hydrogen storage device storing unit being adapted to receive the at least one hydrogen storage device from the hydrogen storage device handling unit, and to store the at least one hydrogen storage device, wherein the hydrogen storage device storing unit is further adapted to transfer another hydrogen storage device to the hydrogen storage device handling unit,~~
~~- a hydrogen refueling unit being adapted to receive the at least one hydrogen storage device from the hydrogen storage device storing unit and to provide hydrogen to the at least one hydrogen storage device,~~
~~wherein the hydrogen refueling unit and the hydrogen storage device storing unit are located next to the landing platform.~~

~~24. The automated hydrogen refueling and storage assembly according to claim 23, wherein~~
~~hydrogen refueling unit and the hydrogen storage device storing unit are located adjacent to each other.~~

~~25. The automated hydrogen refueling and storage assembly according to claim 23, wherein~~
~~the hydrogen storage device handling unit is further adapted to receive the other hydrogen storage device from the hydrogen storage device handling unit and to attach the other hydrogen storage device to the at least one unmanned vehicle.~~

~~26. The automated hydrogen refueling and storage assembly according to claim 23, wherein~~
~~the hydrogen storage device storing unit is located between the hydrogen refueling unit and the landing platform.~~

~~27. The automated hydrogen refueling and storage assembly according to claim 23, wherein~~
~~the hydrogen storage device storing unit comprises a conveyer belt mechanism being adapted to transfer the at least one hydrogen storage device between the hydrogen storage device handling unit and the hydrogen storage device storing unit.~~

~~28. The automated hydrogen refueling and storage assembly according to claim 23, wherein~~
~~the hydrogen storage device handling unit comprises a robotic arm with a grasping mechanism and with a locking/unlocking mechanism, the grasping mechanism and the locking/unlocking mechanism being adapted to work cooperatively to grasp the at least one hydrogen storage device from the at least one unmanned vehicle.~~

~~29. The automated hydrogen refueling and storage assembly according to claim 28, wherein~~
~~the grasping mechanism and the locking/unlocking mechanism are further adapted to work cooperatively to attach the at least one hydrogen storage device to the at least one unmanned vehicle.~~

~~30~~12. A drone defense assembly for neutralization of at least one drone, the drone defense assembly comprising
- an automated hydrogen refueling and storage assembly ~~according to claim 14,~~ for at least one unmanned vehicle, the at least one unmanned vehicle comprises at least one hydrogen storage device, the automated hydrogen refueling and storage assembly comprising
  - a hydrogen storage device handling unit,
  - a movable landing platform being adapted to receive at least one landing unmanned vehicle and to move to a predetermined position,
  wherein the hydrogen storage device handling unit is adapted to move near to the predetermined position and to receive the at least one hydrogen storage device from the at least one unmanned vehicle,
  - a disposing storage unit being adapted to receive the at least one hydrogen storage device from the hydrogen storage device handling unit

and to store the at least one hydrogen storage device,

- a hydrogen storage device storing unit for storing a plurality of hydrogen storage devices, the hydrogen storage device storing unit being adapted to transfer a hydrogen storage device from the plurality of the hydrogen storage devices to the hydrogen storage device handling unit, wherein the hydrogen storage device handling unit is further adapted to attach the hydrogen storage device to the at least one unmanned vehicle,

wherein the disposing storage unit and the hydrogen storage device storing unit are located inside and underneath the landing platform.

- at least one hydrogen fuel cell powered unmanned vehicle comprising at least one hydrogen storage device, and

- a drone-detection radar,

wherein the automated hydrogen refueling and storage assembly further comprises a control unit, the control unit being adapted to communicatively connect to the drone-detection radar and to the at least one hydrogen fuel cell powered unmanned vehicle,

wherein the drone-detection radar is adapted to detect drones, to assess potential threats of the detected drones, and to send at least one control signal to the control unit,

wherein the control unit is further adapted to direct the at least one hydrogen fuel cell powered unmanned vehicle according to the at least one control signal to move in a manner to neutralize the potential threats.