Phyliaus quasicrystals

A particular arrangement which has a number of unusual electromagnetic properties. Composed of silicon, bismuth, oxygen and various allotropes of carbon.

Quasicrystals have applications managing electrons and photons and their relationships with one another due to the very precise way in which atomic resonance of electrons can be manipulated and ordered. Indeed, the propegation of electromagnetic waves through a material can be chanelled in very specific ways impossible in naturally occuring materials - with repulsion or attraction forces occuring in specific directions, not unlike circuitry or advanced semi-conductors.

These effects are achieved by managing electrons and photons and their relationships with one another due to the atomic resonance of atoms and their constitient electrons – which can be ordered and controlled (and aligned in a uniformal pattern, not unlike a magnet) in ways which are impossible in naturally occuring materials - turning photons which strike them into usable electrisity. Phyliaus also has a number of interesting attraction and repulsion forces in specific directions which can be exploited to form semi-conductors.

This behavior can be varied, depending on specific properties of density and arrangement.

Unlike these most materials however, the semi-conductor is able to realize this universal effect through its entire construction rather than some minority component and has a far far wider control over wavelength and amplitude of striking photons and electron behavior.

Specific Implementations

Such behavior means a vast array of possibilities are available - though to implement all of them into a single component (while very very possible) is not cost-effective meaning most quasicrystaline components only ever perform a specific task.

Like other quasicrystal materials, it comes in a number of grades - but also a number of types. Grades generally dictate the efficiency verses density (which goes upward with cost, with A at the highest and F at the lowest) and type dictating the purpose of the cluster or material.

Euralis

An absorber of photons specifically, chanelling them to produce usable electrisity. Ideal for the recovery of electromagnetic emissions (both internally and externally), EMP insulation, sensor systems, communications recievers and an emergency power systems.

Theralis

A superb conductor of heat, best used in radiator and cooling assemblies. When electrically stimulated, tends to flex. In this way, cooling systems using Theralis tend to push air or pump liquid Theralis for cooling purposes. Can be formed into a sort of thermal diode, which will only allow heat to be conducted in one way: away from one object and toward another.

Gamora

Specially designed for use in reactors for converting gamma emissions into usable elctrisity specifically. Very durable against ionization and may be used to create flexible mesh-weaves for protection in high radiation environments.

Phollux

Optimized for use as a semi-conductor, able to widely vary the wavelength and amplitude of electrisity which passes through it.

Capel

A high density capacitor in a gellatine state with limited semi-conductor properties. Used in conjunction with structol, capel can bridge broken circuitry and is usually used in a way not unlike solder or paths in circuitry. Can be hardened into a solid-state, acting as the actual board of the circuit itself - meaning the circuit board the components are laid on acts as a battery of sorts.

Doresu

A general purpose type used for broad spectrum emission and release of photons - ideal for backup field inductors for forming barriers in a gel form or solid components in propulsion and sensor assemblies. Tends to be quite expensive. Usually paired with Euralis. Flexible.

Volumestrice

A specific class used in ultra-high resolution display technologies on the visible light spectrum - giving the illusion of depth when looked at. Operates effectively even when seperated into grains or flakes inside a gel substrate. Very cheap and flexible.