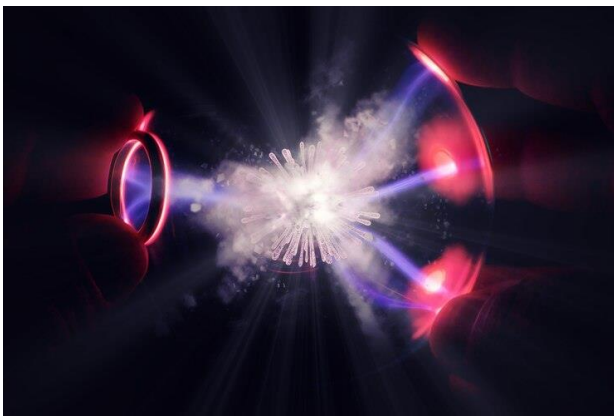


# IP MARKETPLACE

## CONNECTING INNOVATION TO YOUR BUSINESS

### TECH OFFER

## APPARATUS FOR EMITTING LASER BEAM OF THE WAVELENGTH OF 1.53 TO 1.63 MICRON



### ▶ MORE INFORMATION

#### MEGA-TREND

- **Chemicals and Materials**

#### TECHNOLOGY READINESS LEVEL (TRL)

- **TRL 3**

#### PATENT/ GRANTED NUMBER

- **PI 2017703923**

### ▶ TECHNOLOGY OVERVIEW

An apparatus for emitting at least one laser beam of the wavelength of 1.53 to 1.63m, comprising: a diode for supplying a laser beam of the wavelength of 980 nm; a wavelength division multiplexer connected to said diode an erbium-doped fibre, one end of which is connected to said multiplexer, wherein during operation, said diode pumps power to said erbium-doped fibre in a way such that said erbium-doped fibre absorbs the power and emits a laser beam of the wavelength of 1.53 to 1.63 m; a single-mode fibre, one end of which is connected to the other end of said erbium-doped fibre an isolator, one end of which is connected to the other end of said

single-mode fibre, a fibre adapter, one end of which is connected to the other end of said isolator, including: two connector members; and a film of titanium dioxide saturable absorber sandwiched between said members, for locking the mode of laser beam passing through said adapter; and a coupler, one end of which is connected to the other end of said adapter, and the other end of which is divided into two divisions, wherein one of said divisions emits one part of the laser beam as the output of said apparatus, and the other division feeds the remaining part of the laser beam back to said multiplexer. Also provided is a method for fabricating the film of titanium dioxide saturable absorber.

---

## CONTACT US!

Dr. Lee Ching Shya

UMCIE Business Officer

Email: [leecs@um.edu.my](mailto:leecs@um.edu.my)

Phone: +603 – 7967 7351 / 7352