

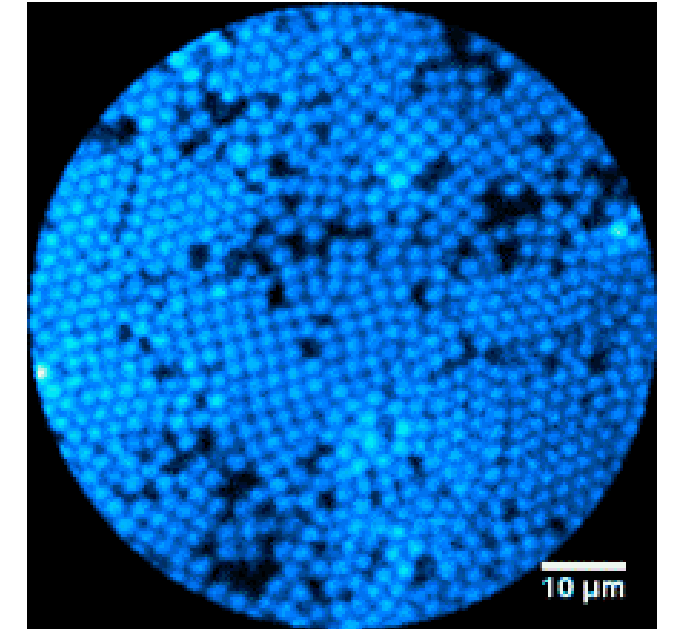
NEW ARCHITECTURE FOR HIGHLY VERSATILE AND USER FRIENDLY PICOSECOND LASER FOR MICRO AND NANOSCOPY



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INTRODUCTION:

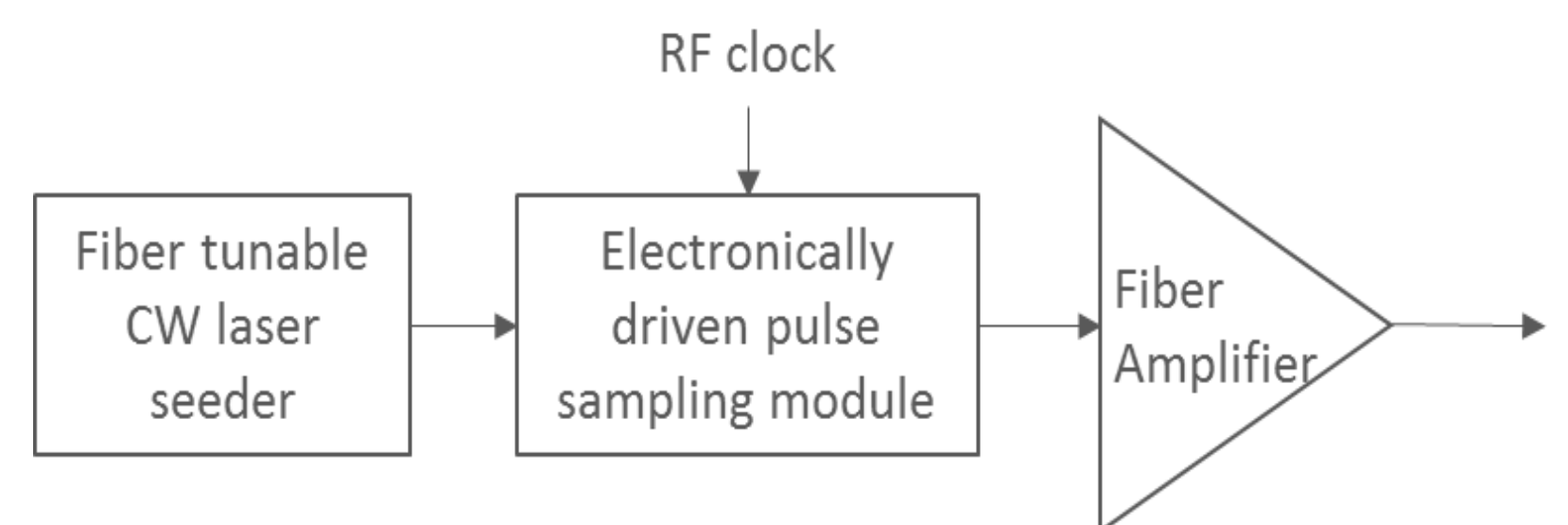
In advanced photonic microscopy research, the versatility of the laser source is a key asset. Many bio physicists are looking for the optimal pulse parameters in order to get as much information as possible from a biological sample without damaging the tissues. So far, in pulsed laser system, the most common solution is mode-locked based laser. However, despites the high quality of the pulses, this technique lack some flexibility. In this poster we will introduce a new ultrashort pulse generation method that allows both quality and flexibility.



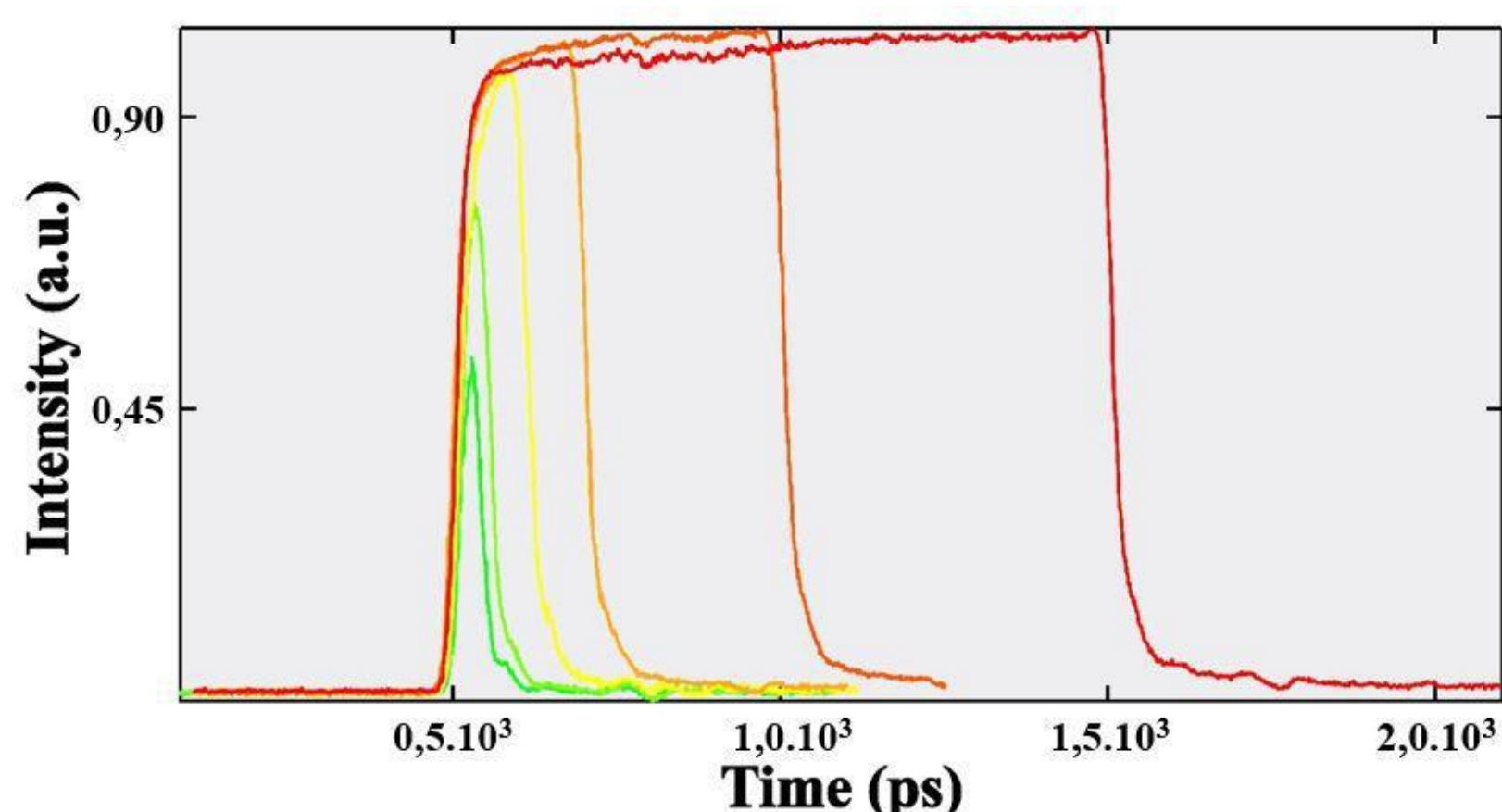
SHG imaging of beads made at the Institut Fresnel, MOSAIC group with Irisiome laser

LASER ARCHITECTURE :

Thanks to these three modules Irisiome Solutions can offer the only solution that gives users the possibility to adjust the pulse duration, the repetition rate and to tune the wavelength within the same system

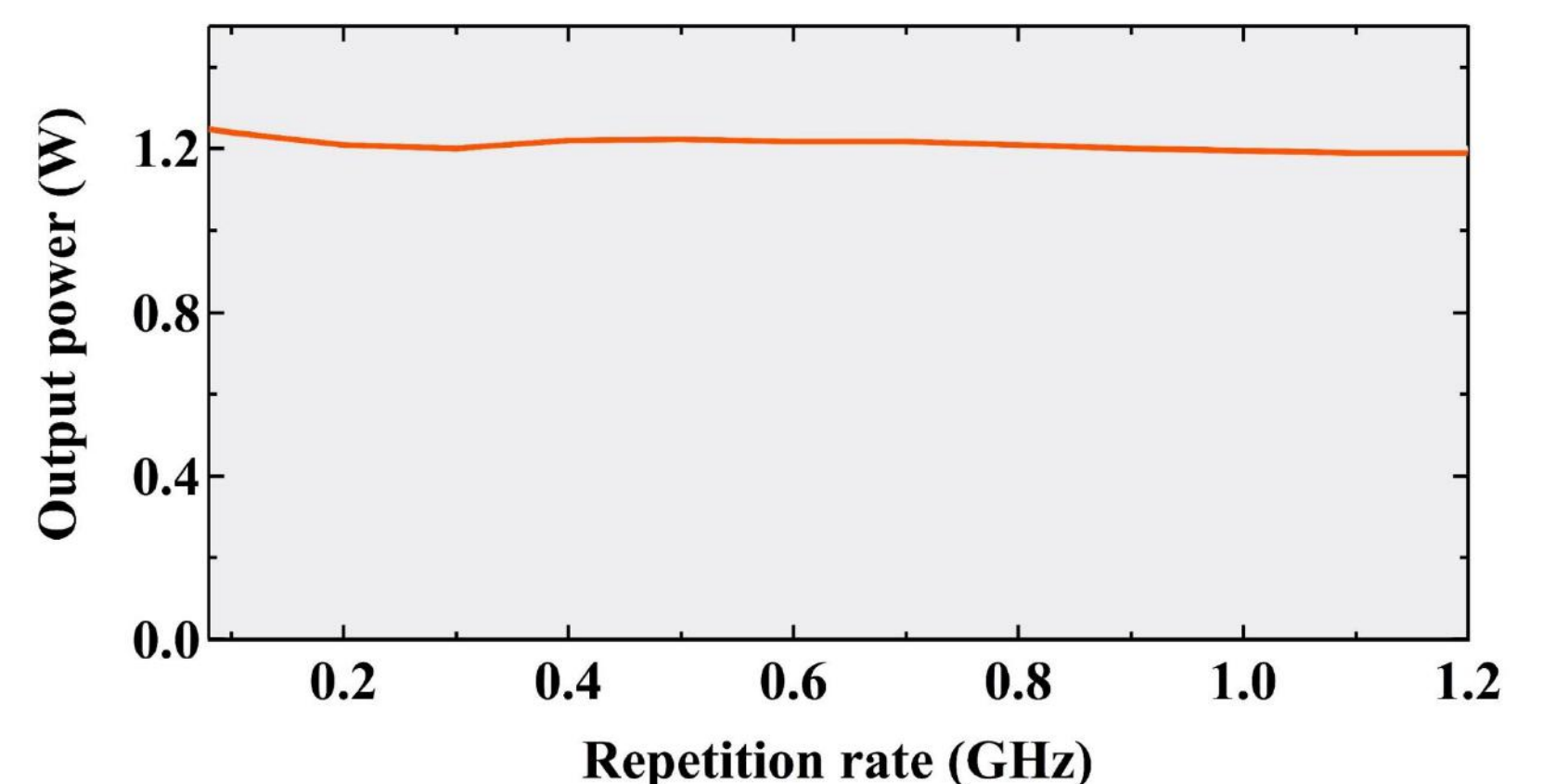


ADJUSTABLE PULSE DURATION:



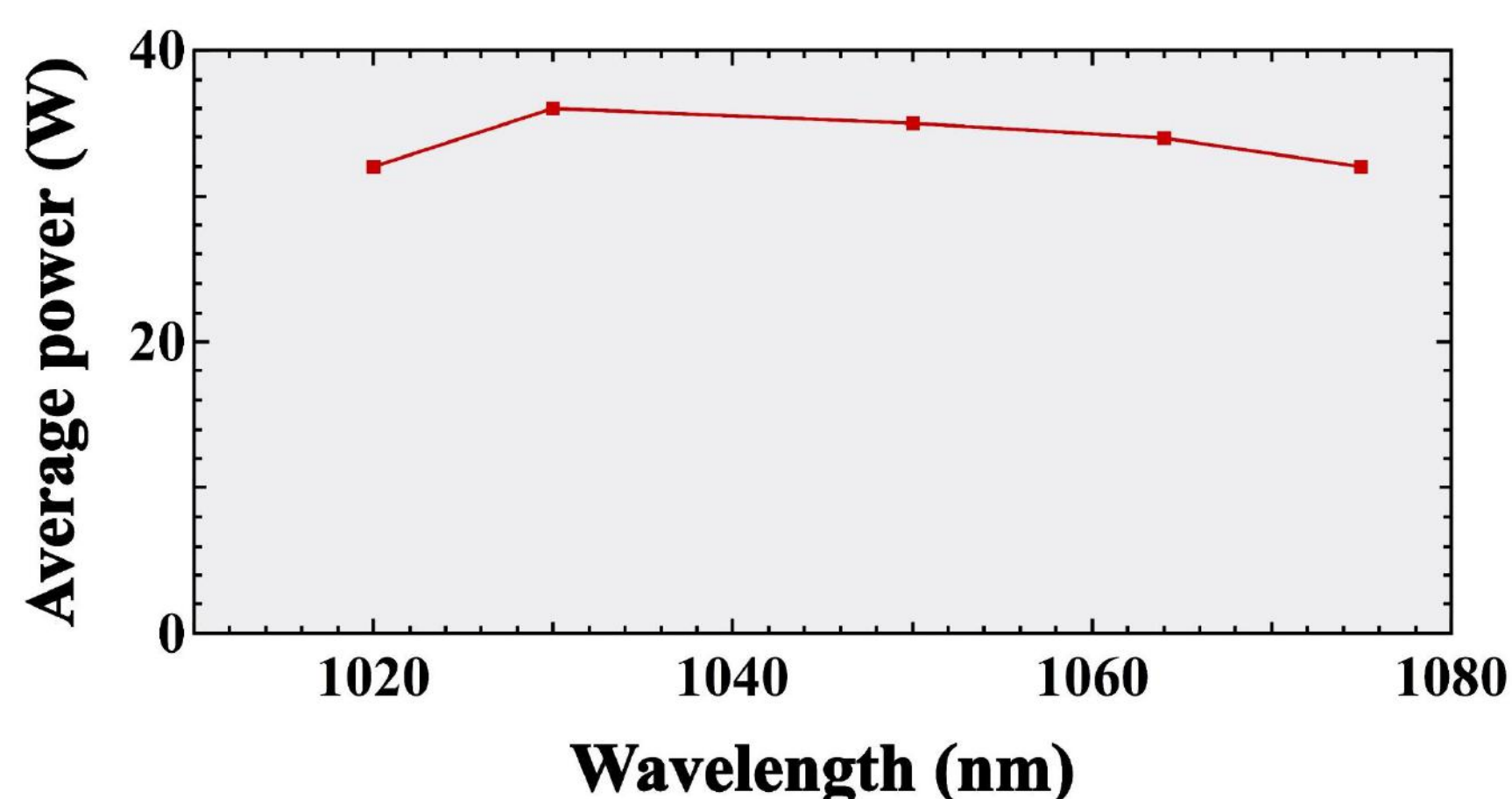
The pulse duration is widely adjustable without spectrum stretching and chirping. The pulse width is set electronically by the operator

ADJUSTABLE REPETITION RATE:



The electronic pulse sampling module allows an easy control of the repetition rate up to GHz, and a possible synchronization to a master clock

TUNABILITY CURVE:



The tunability over 60 nm is obtained thanks to an entirely fiber architecture. The required wavelength is piloted through a software

CONCLUSION:

Irisiome Solutions has designed most highly versatile picosecond fiber laser on the market to be able to fulfill bio physicist most demanding needs.



The main applications for this laser are CARS, STED, non linear microscopy