The Past, Present and Future of Laser Technology ||

Check the important words and phrases used in the session and what they mean. You can also use the read-aloud voice on the website to check your pronunciation.

Words & Phrases	訳
1. laser welding	レーザー溶接
2. mechanics	構造、機構
3. multi-photon	多光子
4. non-invasive	非侵襲性の
5. scalpel	外科用メス
☐ 6. bleeding	出血
□ 7. cavity	由歯
□ 8. lesion	傷、病変
9. cornea	角膜
🗌 10. retina	網膜
11. tomography	トモグラフィー、X線断層写真撮影(法)
12. affordable	入手可能な、手頃な
🗌 13. neuron	ニューロン、神経単位
🗌 14. synergy	相乗効果
🗌 15. scanner	スキャナー、走査器
🗌 16. scan	~をスキャンする、走査する
17. launch	~を開始する
🗆 18. journal paper	学術論文誌
🗌 19. benefit	~のためになる
20. pitfall	不測の危険 [困難]、落とし穴

Let's join the session!

The following questions are based on the contents of the session. Watch the session and answer each question.

[1] What can ultrafast pulsed laser do to metal and glass?

[2] How are ultrafast pulsed lasers used in biological and medical applications?

[3] What is distinctive about multi-photon microscopes?

[5] What is your opinion on how advanced research in university labs can be made beneficial to society?



[1] The following is a summary of the session. Write down the appropriate words in the blanks in the passage. You may use the same words for several blanks.

Ultrafast pulsed lasers have much greater capabilities than ()) these capabilities, lasers.) () (various applications have been (). In material processing with lasers, conventional lasers melt and process metal ()), but ultrafast pulsed lasers can drill fine holes (() () into the surroundings. It is also possible to process () () such as glass and crystals. Ultrafast pulsed lasers are also used in () and () research. Ultrafast pulsed lasers can shine through transparent media, so imaging of) is possible with these lasers. Multi-photon) (microscopy is able to create clearer images of () () and is more compact and () than conventional microscopes. The Stimulated Raman Scattering microscope used in the study of ()) also uses ultrafast pulsed lasers as a ()). In the development of these applications, collaboration between) is very) () () (important. A joint force of different experts moves the project (quickly. In addition, it is also an important challenge to consider how research in the laboratory can contribute () ().

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[2] Write down what you learned in today's session.