

IPSSC +
CMBO

STUDENTS' CONFERENCE

Jožef Stefan International Postgraduate School
and Young Researchers' Day CMBO

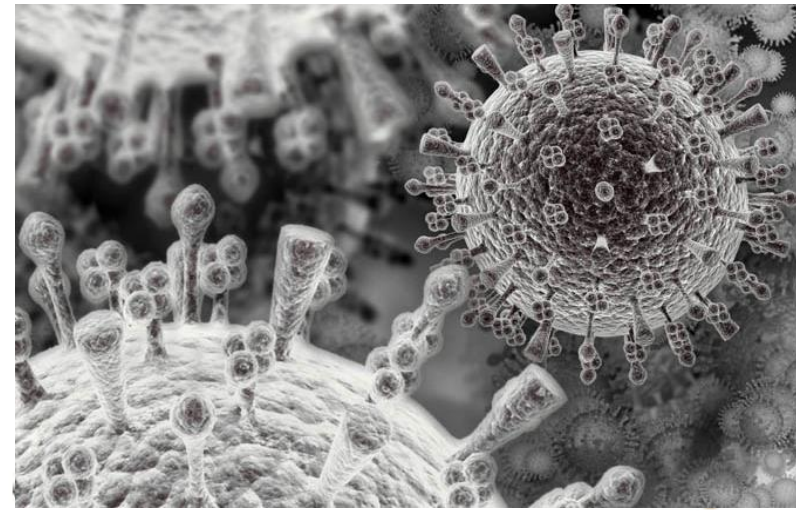
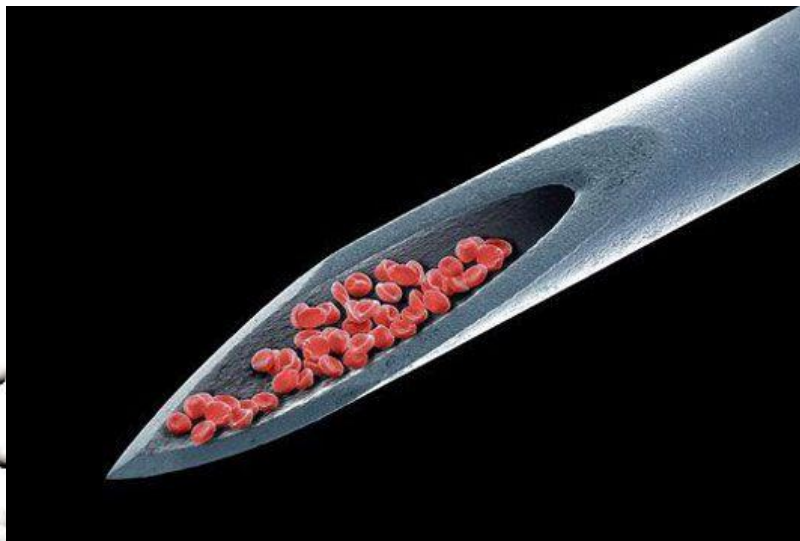
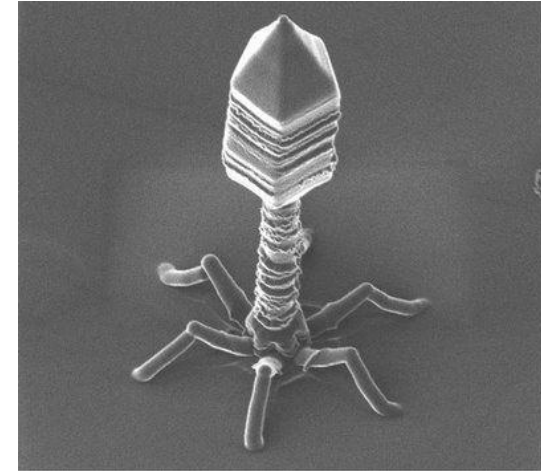
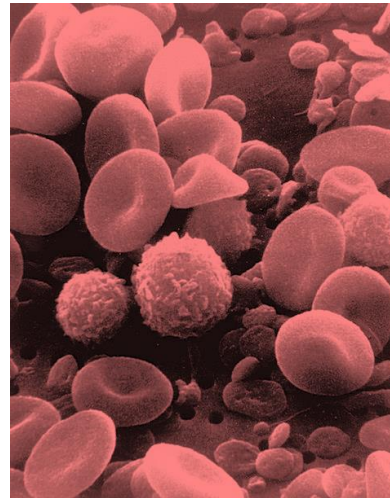
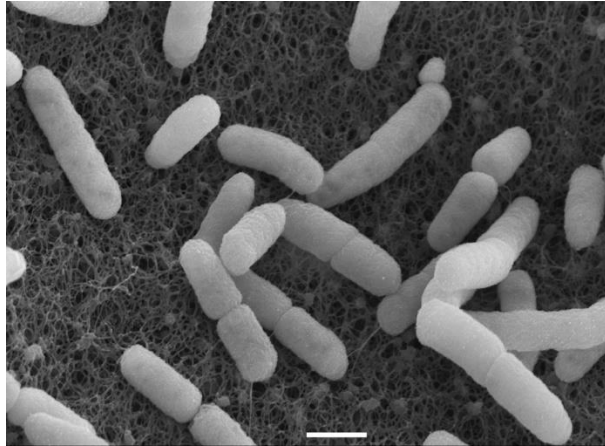
19 and 20 April

In-situ observations of the growth of the gold nanoparticles

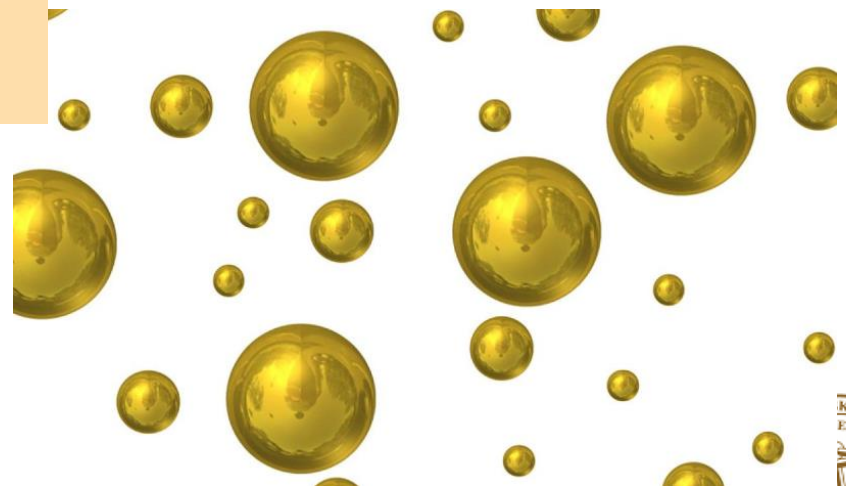
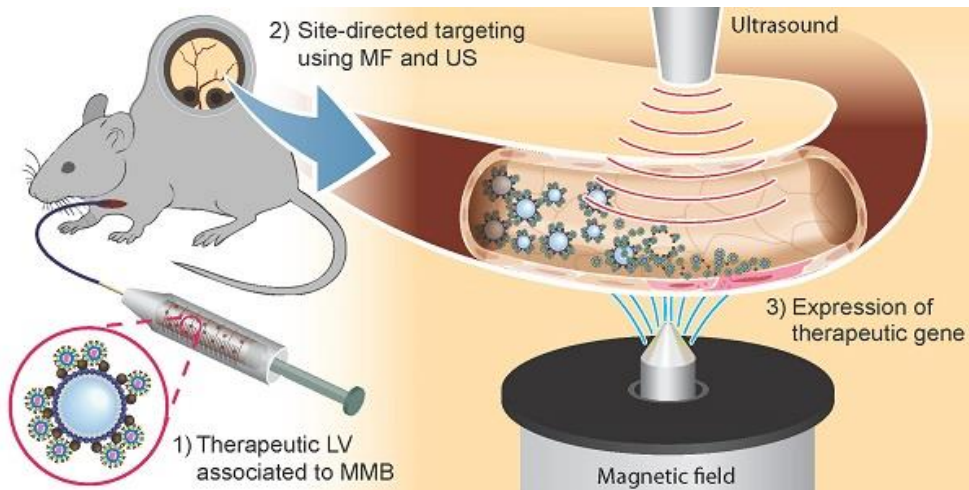
Bojan Ambrožič
Jožef Stephan Institute

MOTIVATION FOR THE WORK:

Many samples are small are in liquid

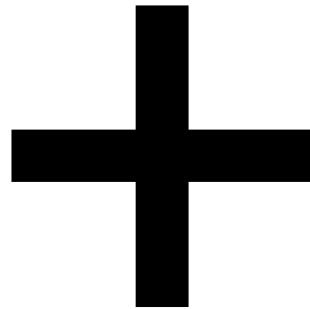


Gold nanoparticles for theranostics



However observations of liquid samples in high vacuum of an electron microscope is not possible

LIQUIDS



ELECTRON MICROSCOPES



MOTIVATION FOR THE WORK

LIQUIDS

ELECTRON MICROSCOPES



LIQUID CELL TEM: HOW IT WORKS?



Credit: Protochips, inc.



LIQUID CELL TEM



Credit: Protochips, inc.



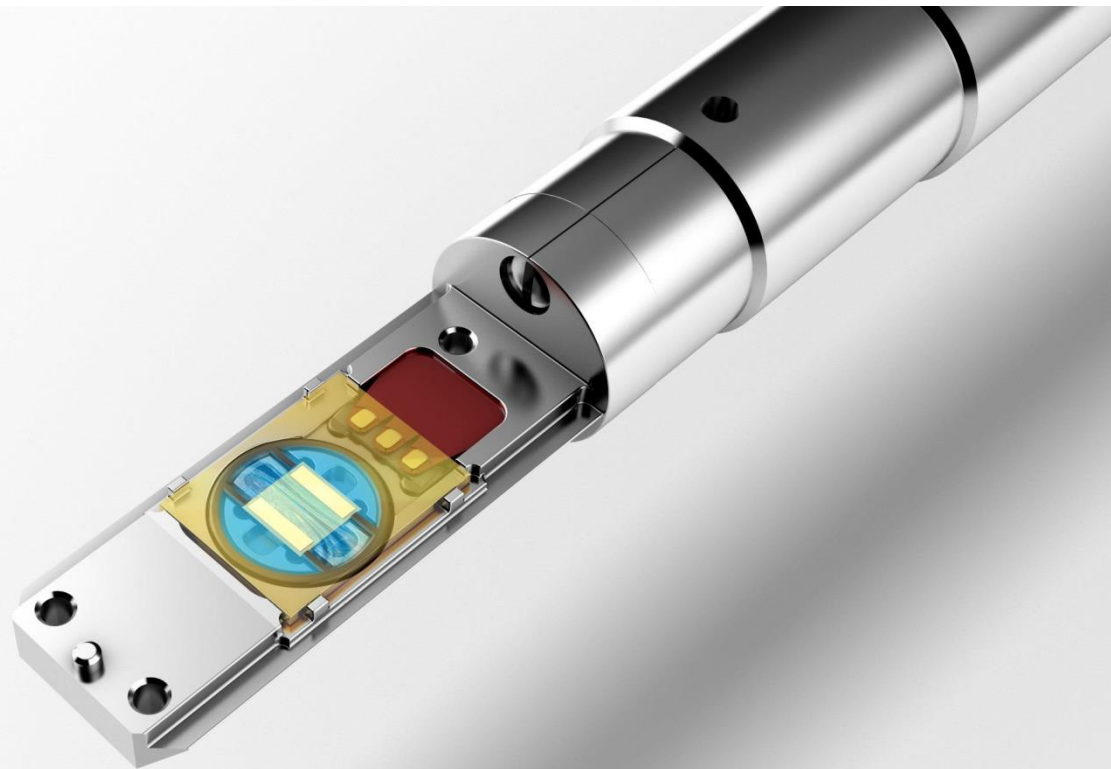
LIQUID CELL TEM



Credit: Protochips, inc.



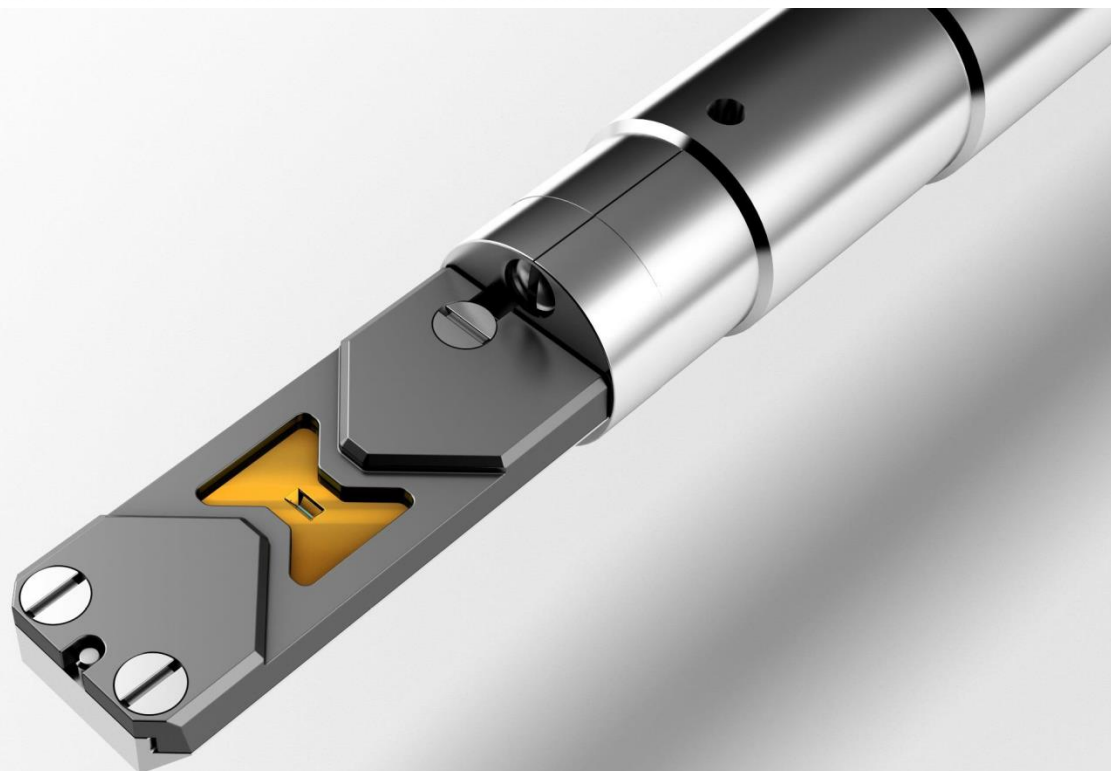
LIQUID CELL TEM



Credit: Protochips, inc.



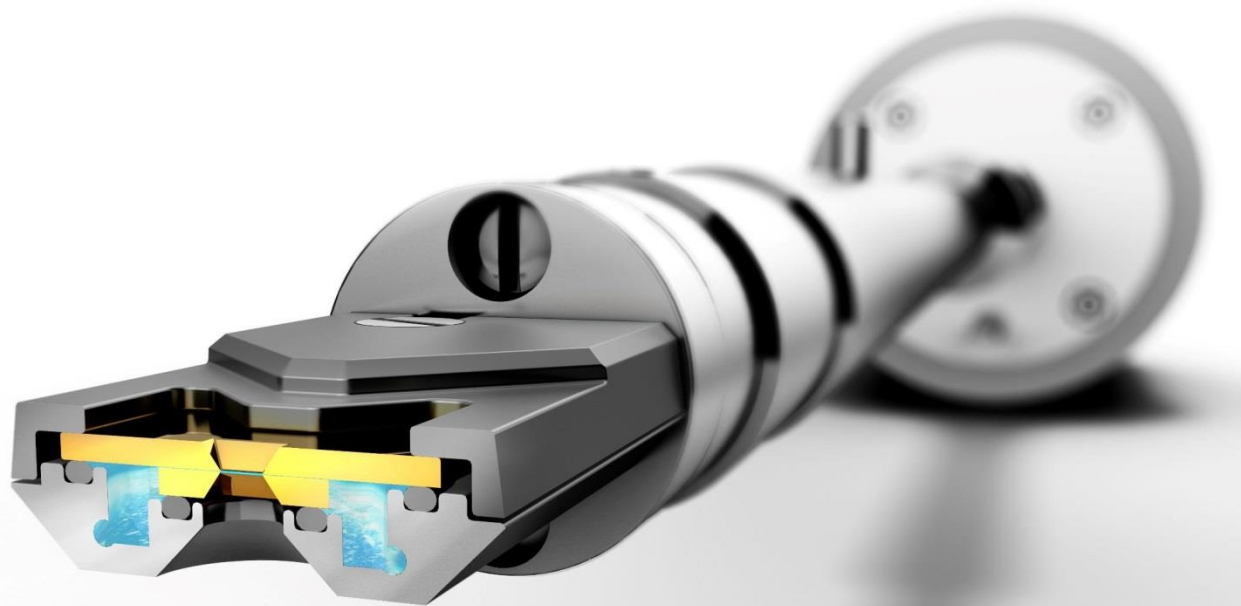
LIQUID CELL TEM



Credit: Protochips, inc.



LIQUID CELL TEM



Credit: Protochips, inc.



LIQUID CELL TE_sM





| | |
|------------------|----------------|
| Frames captured | 4478 |
| Box time | 1.38 |
| Time left | 0:00:58 |
| Box file size | 47.000 |
| Distance from | 5878.000 |
| Video | |
| Time | 47:31:37 |
| Acquisition rate | 13.77977 (fps) |
| Default | 1.000000 |
| Audio | |
| Relative rate | 1.000000 |
| Data rate | 12.000000 |
| Resolution | 8192 x 8192 |
| Sync | |
| VT adjust | 0 ms |
| Current rate | 39 ms |

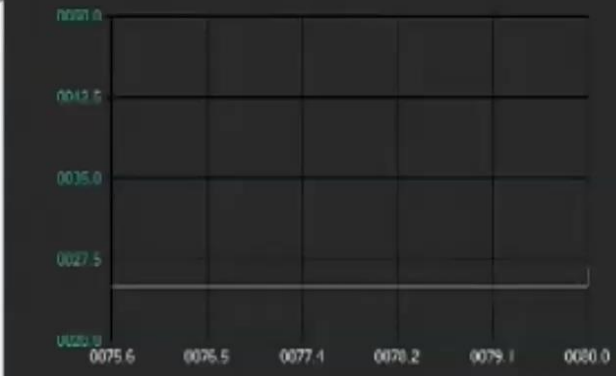
SYSTEM STATUS

Channel A
26.91 °C

NOTES

DATA VIEW - LIVE

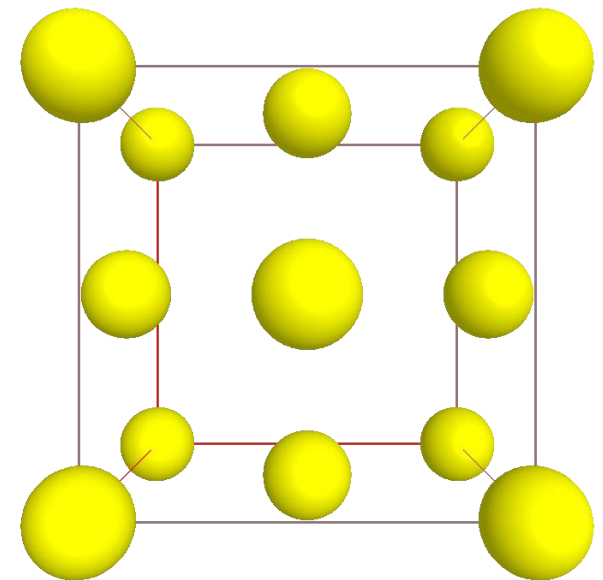
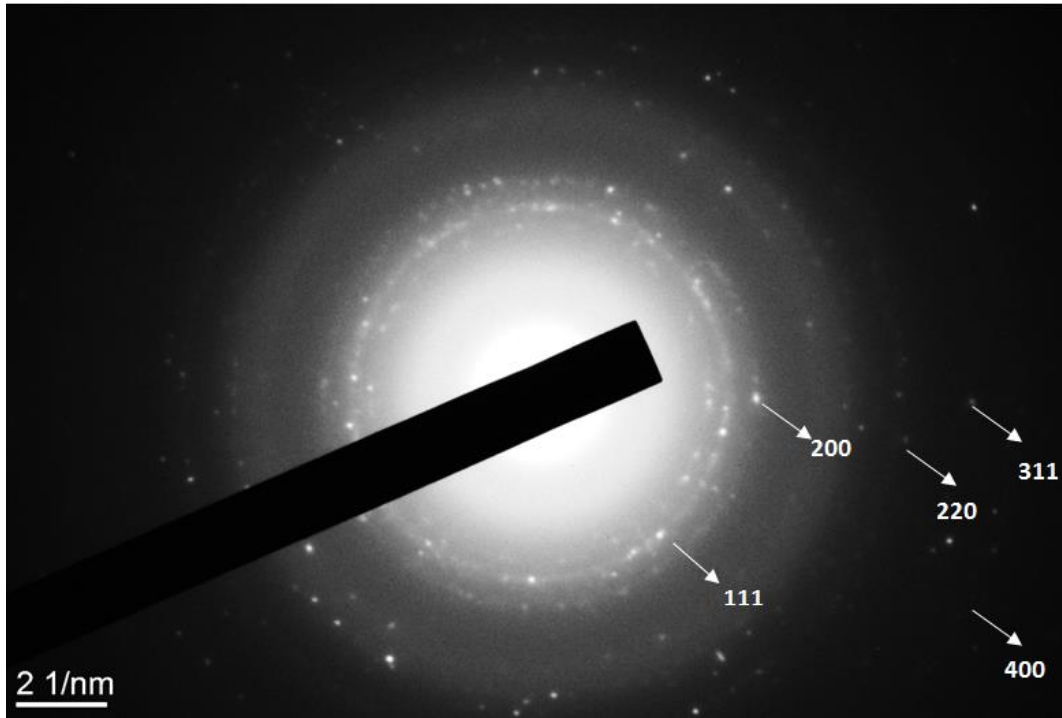
Y Channel A Temperature °C
X Time min



90:02



FCC gold nanoparticles



ACKNOWLEDGMENTS

- Prof. dr. Sašo Šturm
- Asist. Prof. dr. Kristina Žužek Rožman
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- Jožef Stefan Institute

