



Motivation

- ◆ KTN (potassium tantalate niobate : $\text{KTa}_{1-x}\text{Nb}_x\text{O}_3$) is a most promising material thanks to its high dielectric constant and significant electro-optic properties. One of our targets is to develop a 3-dimensional scanner.



Originality

- ◆ Both a 2-dimensional scanner and a varifocal lens have a faster than MHz response.
- ◆ The 2-dimensional scanner is capable of large angle, low-voltage beam scanning. The varifocal lens can change its focal length quickly.



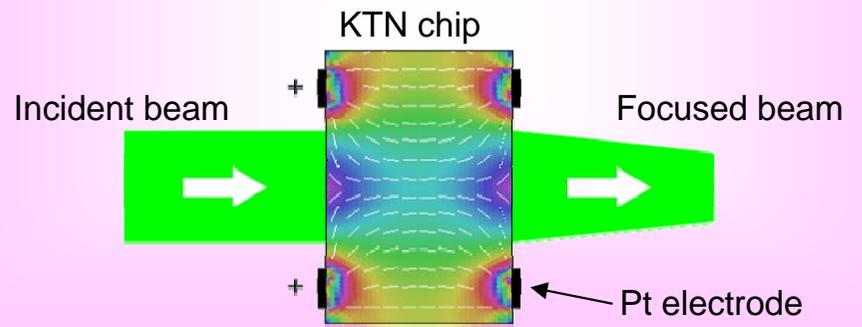
Impact

- ◆ These results will be applied, for example, to 3-dimensional measurement, and a laser scanning display.



Varifocal lens

- ◆ Simple structure of KTN chip and electrodes
- ◆ Focal length movement is controlled by applied voltage



3-D measurement device

- ◆ 3-dimensional scanner using KTN varifocal lens and 2-dimensional KTN optical scanner

