## Supporting Information for

# Bio-Sensing with Compact Discs and Nanofibers

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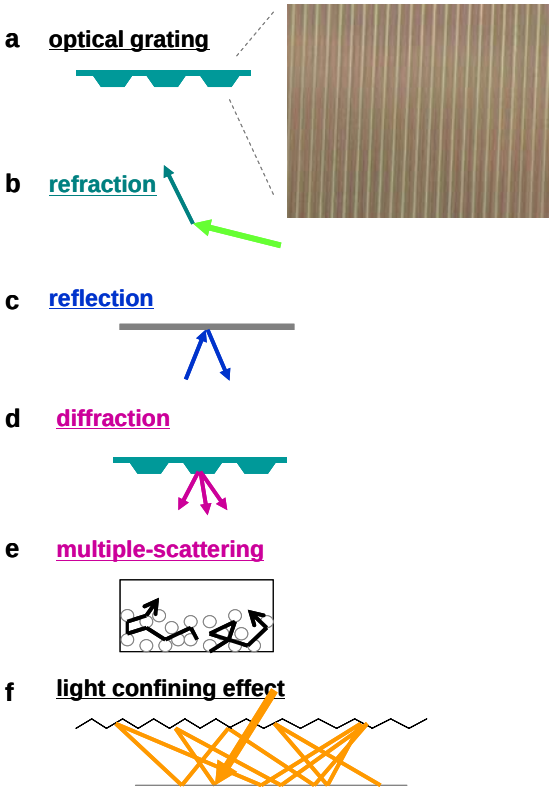
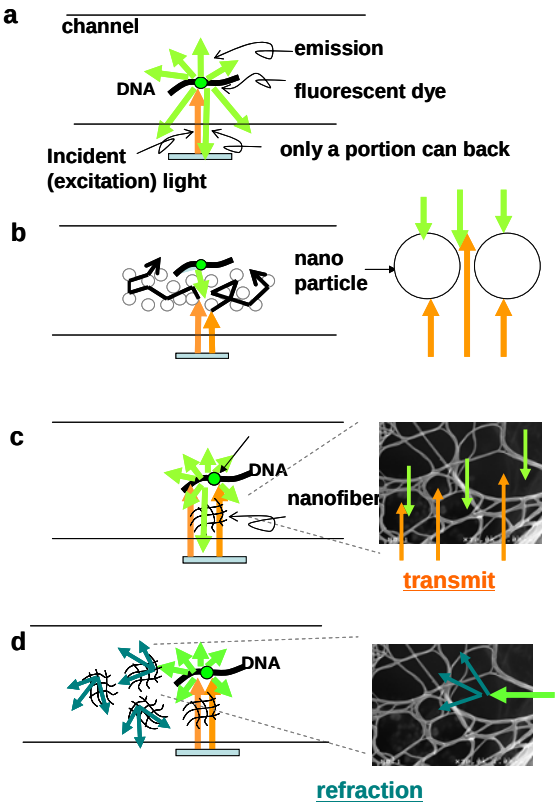
## Supporting Figures

We supply the supporting figures to supplement the descriptions in the text.




**Supporting Figure 1**
Schematic images of **a)** optical grating, **b)** refraction, **c)** reflection, **d)** diffraction of light, **e)** multiple light scattering, and **f)** light-confining effect (solar cell effect) are shown.




**Supporting Figure 2**
Reflection, diffraction and light-scattering images by media. **a,** The conventional system: the emission of light from fluorescent dye is dispersed spherically. Only a portion of the emitted light can travel back to the detector. **b,** The conventional multiple-light scattering image in the buffer containing nanospheres. Some incident light beams are interrupted by the surface of the nanoparticles. Only a portion of the incident light can travel through the particles. The amount of incident light that hits the DNA will decrease. **c,** Additional nanofiber medium: both incident and excitation lights can travel through the nanopores, so the absorption of emission and excitation lights will be lower than in the conventional methods (a) and b)). **d,** Refraction image on the surface of nanofibers.