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REVIEW ARTICLE

Optical manipulation of colloids and defect structures in anisotropic liquid crystal fluids

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Keywords:

liquid crystals, colloids, optical trapping, optical tweezers, optical vortices, optical lattices, optical microscopes, optical microscopy, optical microscopy, optical microscopy

1. Introduction

The optical manipulation of colloids and defect structures in anisotropic liquid crystal fluids is a topic of great interest in the field of soft matter physics. This review article discusses the recent progress in this area, focusing on the optical manipulation of colloids and defect structures in anisotropic liquid crystal fluids.

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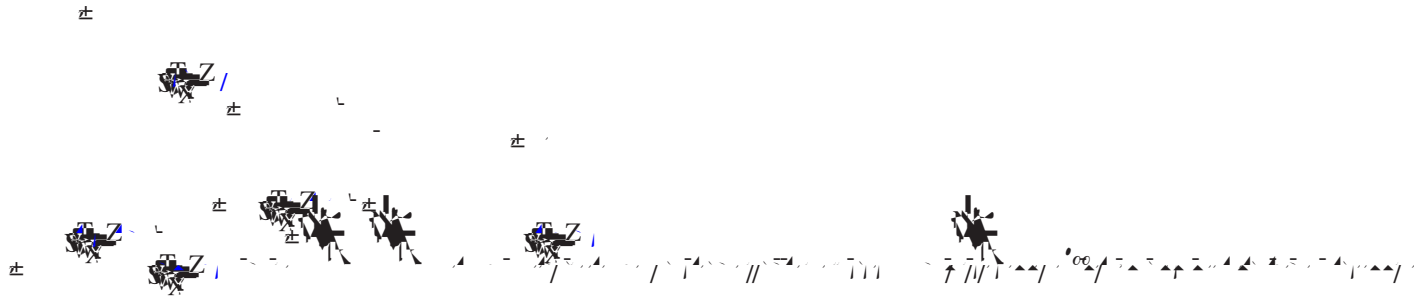




Table 1.

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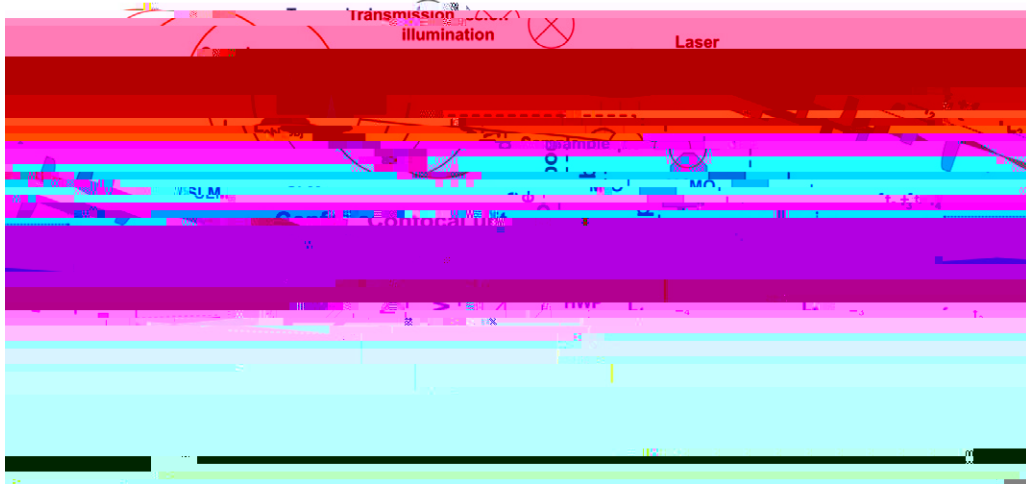


Figure 1

The diagram illustrates the optical path of a laser beam through a series of components. The beam starts at the top right, labeled 'Laser', and travels left through a lens. It then reflects off a mirror and passes through another lens. The beam is then directed downwards through a series of lenses and mirrors, eventually reaching a detector or sensor at the bottom. The diagram is annotated with various labels such as 'transmission', 'illumination', and 'Laser'. The background is a gradient of colors from red at the top to blue at the bottom.



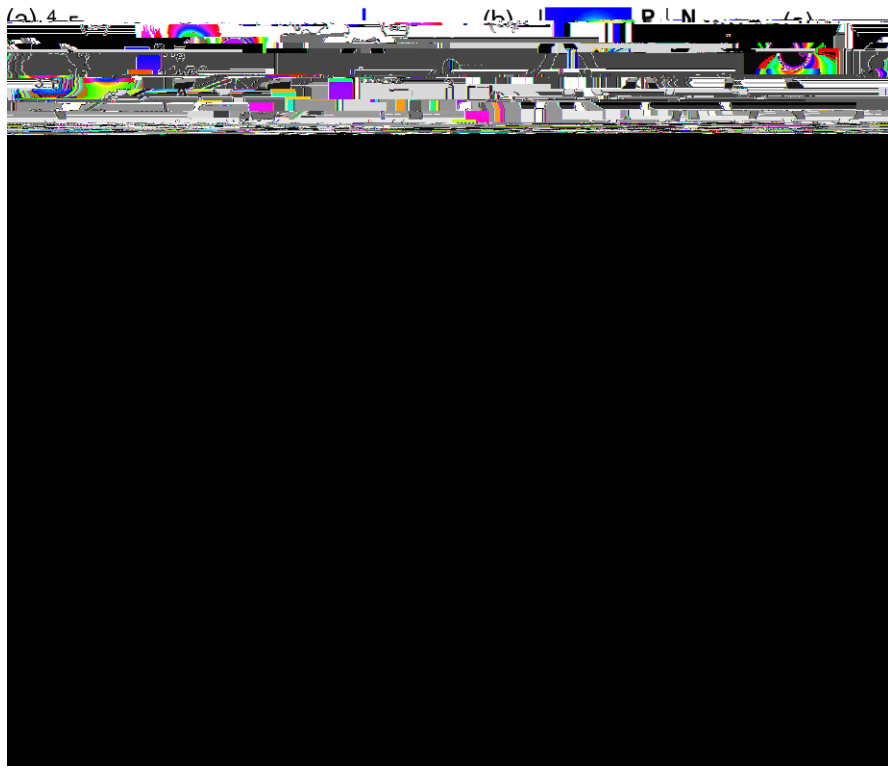


Figure 3. $\Delta \rho_{\text{eff}} / \rho_{\text{eff}}$ vs $\Delta \rho_{\text{eff}} / \rho_{\text{eff}}$ vs $\Delta \rho_{\text{eff}} / \rho_{\text{eff}}$

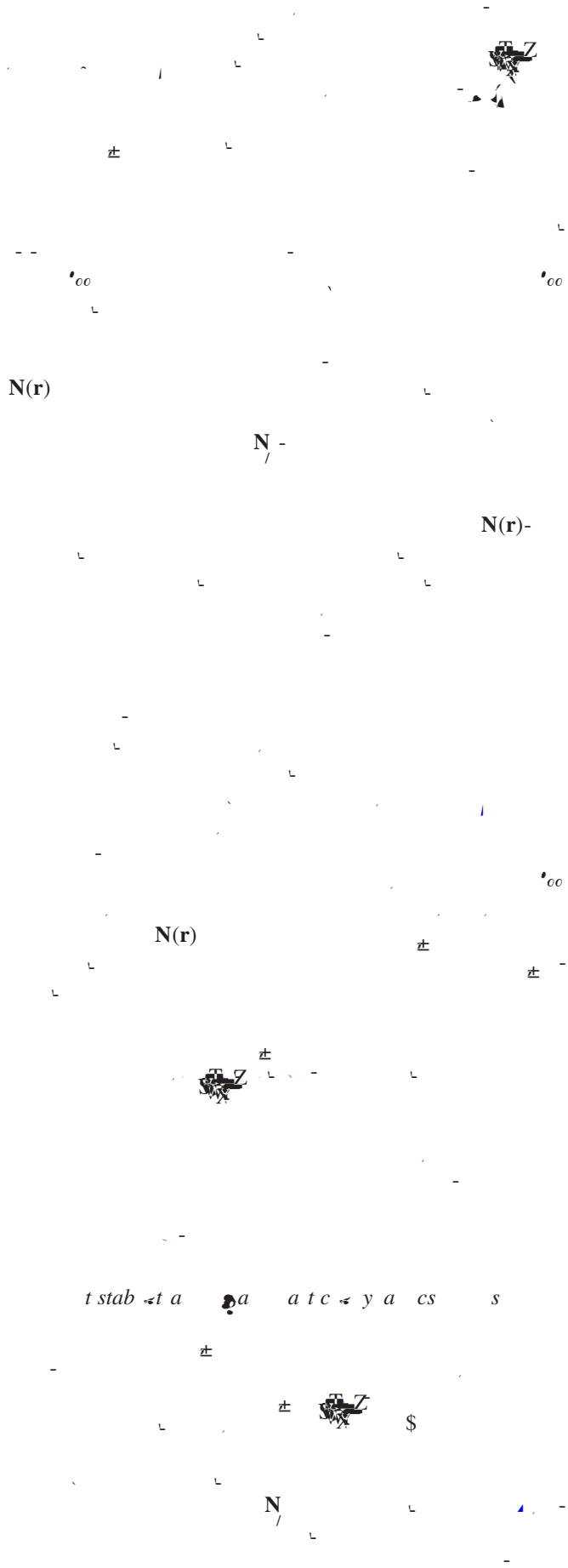


Figure 4.

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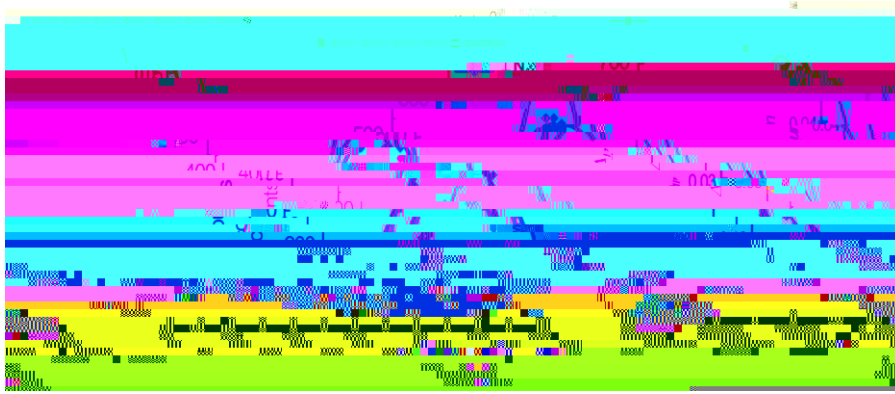


Figure 5.

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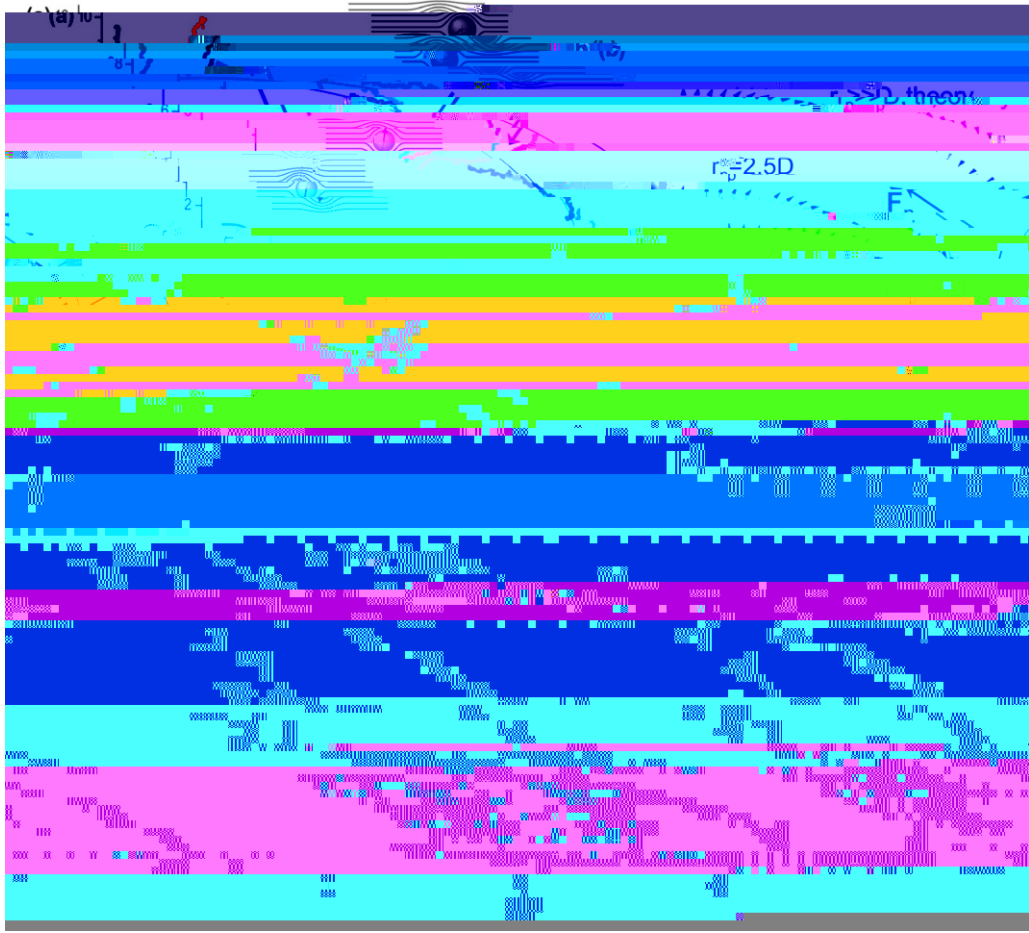
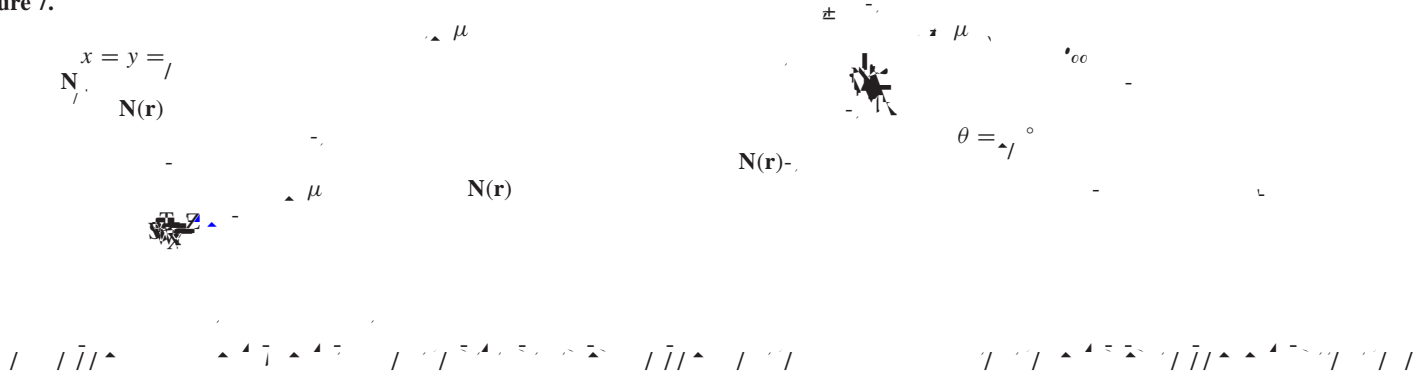


Figure 7.



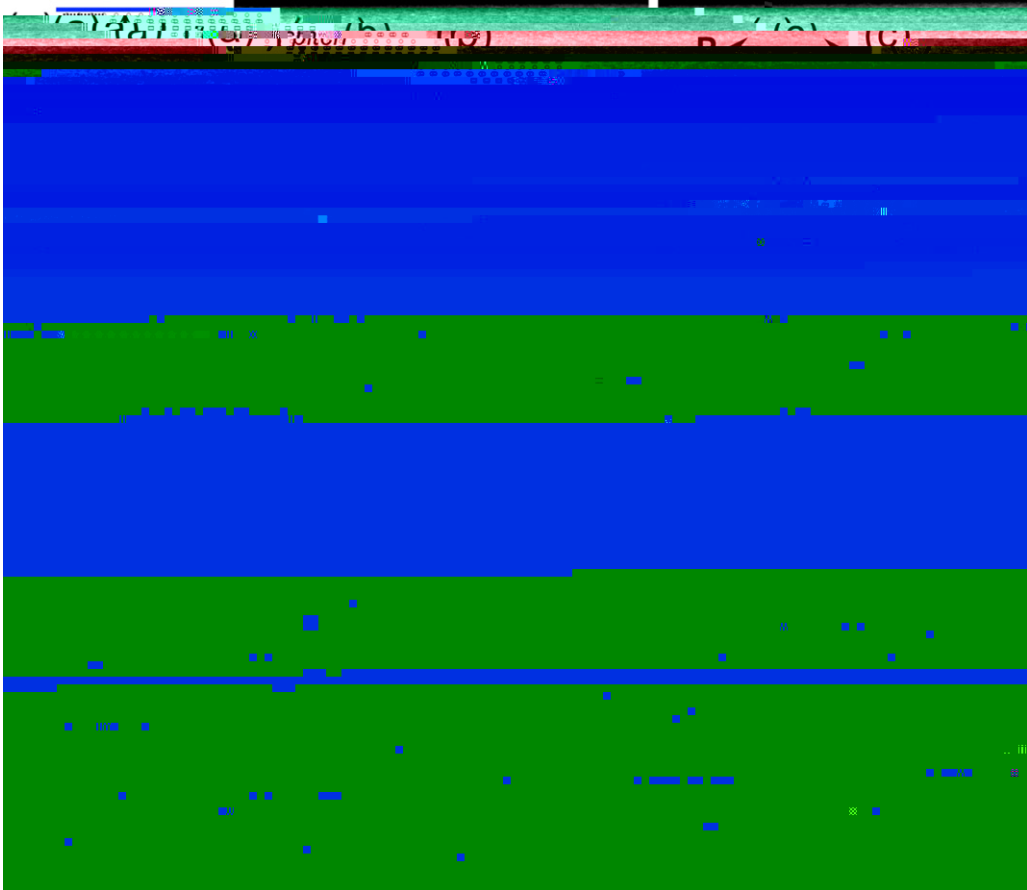


Figure 8.

Figure 9.



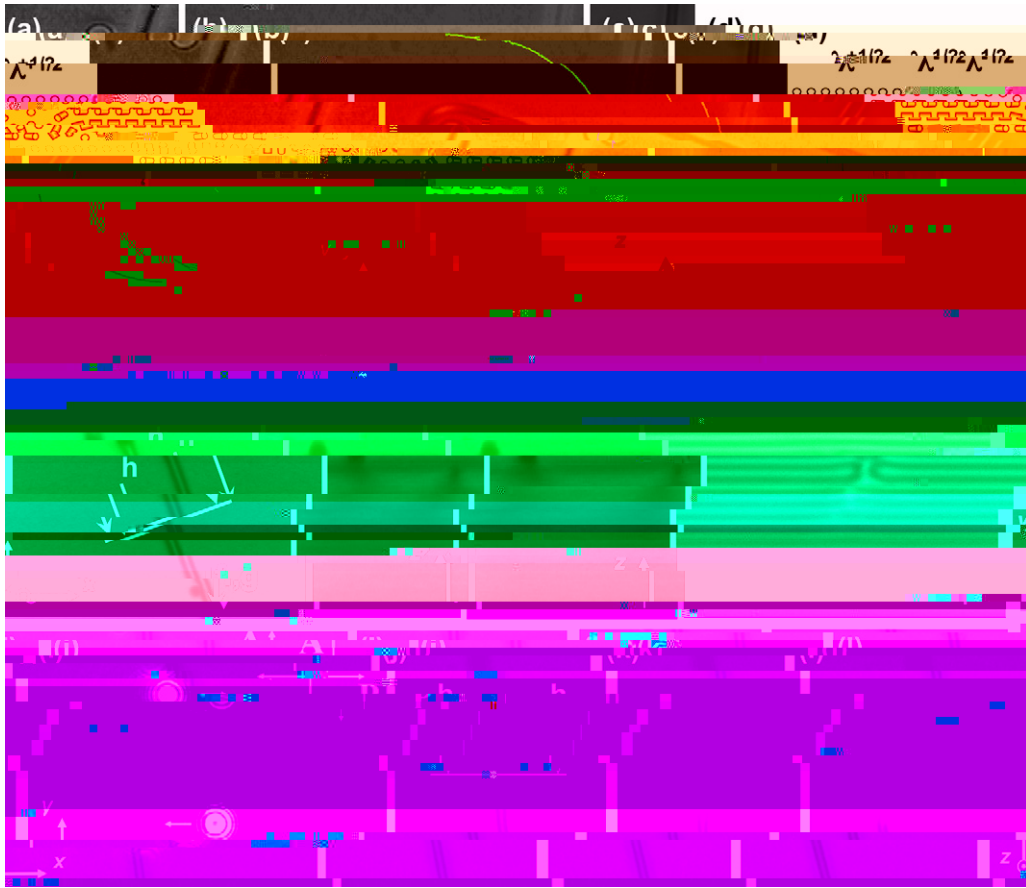


Figure 10.
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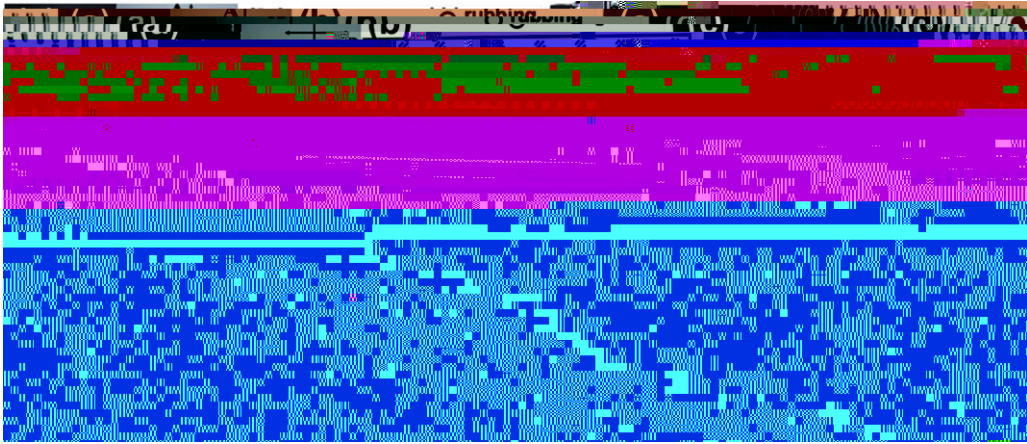


Figure 11.





Figure 12

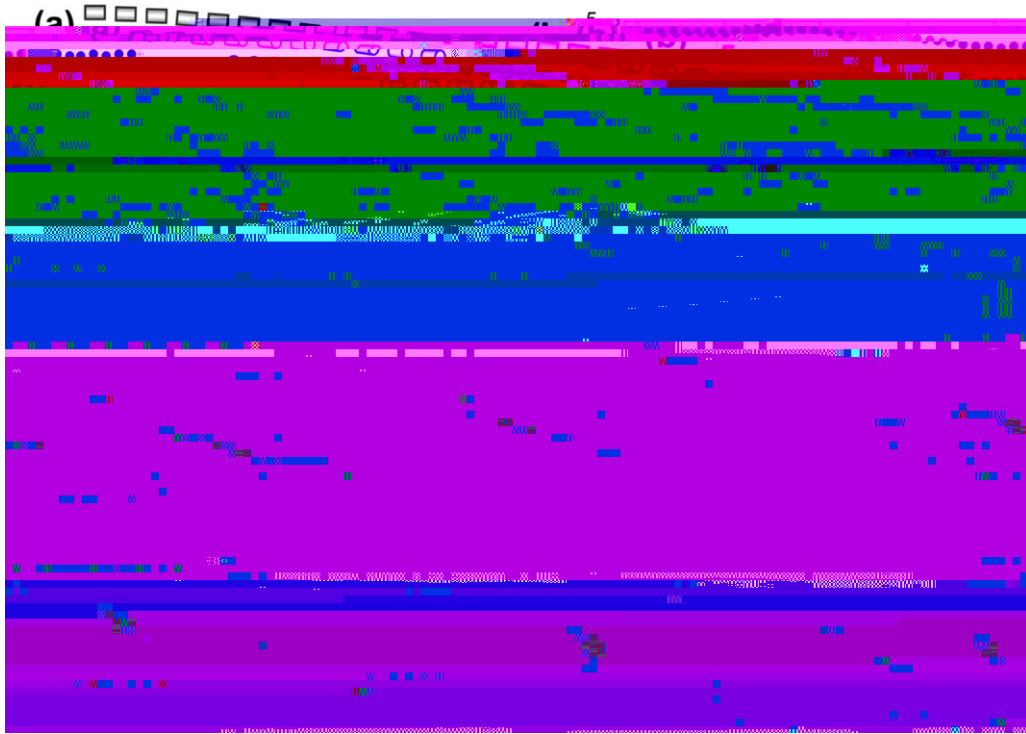


Figure 13.

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