

Study on the color changes of Bacteriorhodopsin(BR)

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Bacteriorhodopsin(BR) is the membrane protein, with the function of a photoactive proton pump, found in the purple membrane of *Halobacterium salinarium*. The photochromic retinal protein(BR) is separated by evolutionary processes and shows reversible color changes between violet and yellow that can be induced by light. These color changes are easily recognizable with the bare eye and require only a little light, e. g. daylight or light of a desk lamp. The photochromic features of the material will help prevent falsification of documents by scanning or copying, since the light intensity required by these reproduction processes leads to a color change of the embedded security feature. Color printing inks can be developed based on Bacteriorhodopsin e. g., for screen processes and provide the ability to apply the material on various substrates.

References

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