

# CHITOSAN LIGHT SENSOR

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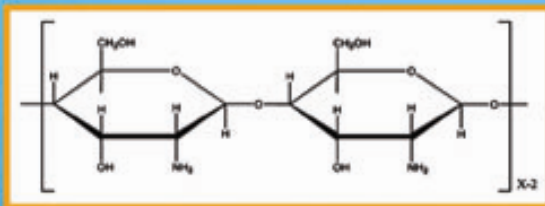
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## INTRODUCTION

Chitosan is a bio-polymer which has promising potential to be investigated as an alternative light sensing materials. It is produced by treating seafood waste, especially shells from crustaceans (shrimps, crabs, lobsters, krills, etc).



## MOLECULAR STRUCTURE

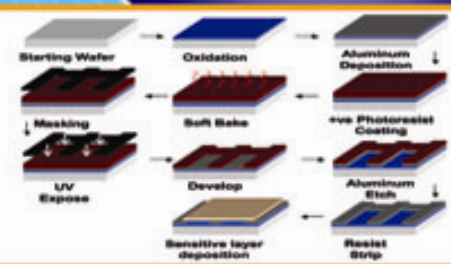


Has both hydroxyl and amino groups that enable the easily chemical modification to improve its electrical properties.

## CHITOSAN GEL



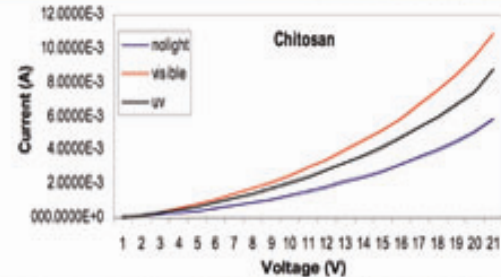
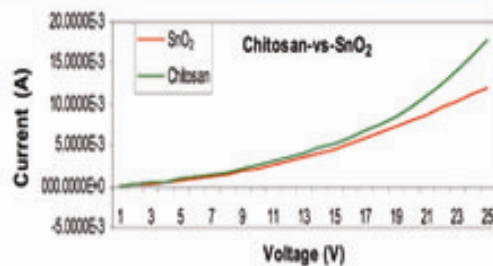
## SENSOR FABRICATION



## NOVELTY

New light sensing material from natural biopolymer chitosan

## I-V CHARACTERISTICS



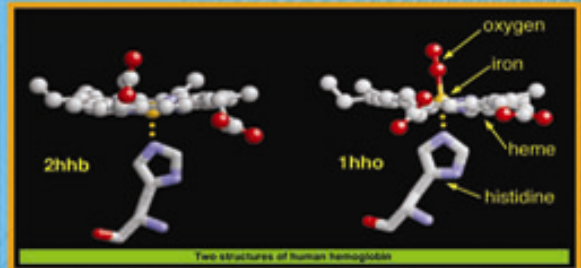
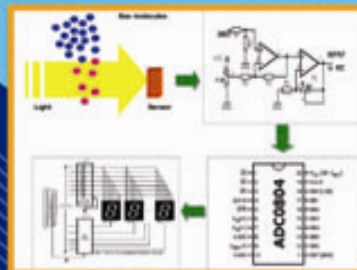
## BENEFITS

- Reproducible resource
- Simple fabrication method
- Not requiring expensive facilities
- Ease of miniaturization

## COMMERCIAL POTENTIAL

- Low cost sensor fabrication
- Portable to travel
- Reliable sensor
- Possible mass production

## POTENTIAL APPLICATION



Adult blood contains four species of hemoglobin:

- Oxyhemoglobin (O<sub>2</sub>Hb)
- Reduced hemoglobin (Hb)
- Methemoglobin (MetHb)
- Carboxyhemoglobin (COHb)

## ACKNOWLEDGEMENTS

- MOSTI under FRGS 9003-00184,
- Short Term Grant 9001-00175,
- Ainnie Shakirah Arif, Aminuddin Mahmud, Mohd Aminuddin Kasim & Mohd Hafiz Zainol