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# Fibreglass brick

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**ABSTRACT:** Fibreglass bricks can be used to create architectural structure such as partition wall or screen walls across part of a room, around a shower or bath, as part of stair constructions and so on. They are capable of dividing a room without blocking light transmission.

## I. INTRODUCTION

The name of our project is fibreglass Brick which is made for light transmitting purpose. In our brick we use epoxy resin, cobalt, hardener etc. We have made this brick in comparison of glass brick. And the cost of glass brick is more than 2.7 times comparing to our brick and our brick is more durable than glass brick. Load carrying capacity (compressive strength) of our brick is high than any type of brick available in market. Fibreglass Brick is used for any purpose eg. decorative purpose, partition wall, light transmitting purpose (where glass used) etc. Fibreglass brick is water proof, dust proof, scratch proof and easy to use and place anywhere.

### Objectives-

1. Low manufacturing cost
2. Increase durability
3. Light in weight

## II. METHODOLOGY

The purpose of making this brick is simply that you can use this brick wherever you want to pass the light but you do not want to put the bulb in that place. You can also use this brick for decorative purpose, partition purpose. We collected all the data we need from our guide.

We also did a market survey so that we know how important our project is to the market and how long it will last in the market. After the market survey, we started purchasing the materials required for the project and create the mould for the project. Then we started casting our project exactly as our guide said. And finally we casted the fibreglass brick. We also took some tests on our brick like compressive test, soundness test, drop test, hardness test etc.



### III. LITERATURE REVIEW

#### 1. A Building Brick Principle to Create Transparent Composite Films with Multicolor Emission and Self-Healing Function (2018)

Transparent luminescent composite films Containing water-based RGB chromophores using a simple cellulose emissive Films with high transparency as well as superior, Shining and good architecture building and high profit for manufacturers

#### 2. Impact-resistant nacre-like transparent materials(2019)

Glass has outstanding optical properties, hardness, and durability, but its Applications are limited by its inherent brittleness and poor impact resistance. Lamination and Tempering can improve impact response but do not suppress brittleness. We propose a Bioinspired laminated glass that duplicates the three-dimensional “brick-and-mortar” Arrangement of nacre from mollusk shells, with periodic three-dimensional architectures and Interlayers made of a transparent thermoplastic elastomer.

#### 3. Ultra-strong, ultra-tough, transparent, and sustainable nanocomposite films for Plastic substitute( 2020)

Plastics play a critical role in daily life but possess a considerably increasing negative impact on the environment and human health.Fabrication of biodegradable and eco-friendly alternatives with competitive properties for plastic substitute is urgently needed.

#### 4. Polarization conversion based on Mie-type electromagnetically induced Transparency (EIT) effect in all-dielectric metasurface (2018)

In this paper, we propose an all-dielectric Metasurface to realize the linear-to-circular polarization conversion of resonantly transmitted Waves.

#### 5. High-precision modular microfluidics by micromilling of interlocking injection-Molded blocks(2018)

Wider use and adaptation of microfluidics is Hindered by the infrastructure, knowledge, and time required to build prototype systems, Especially when multiple fluid operations and measurements are required.

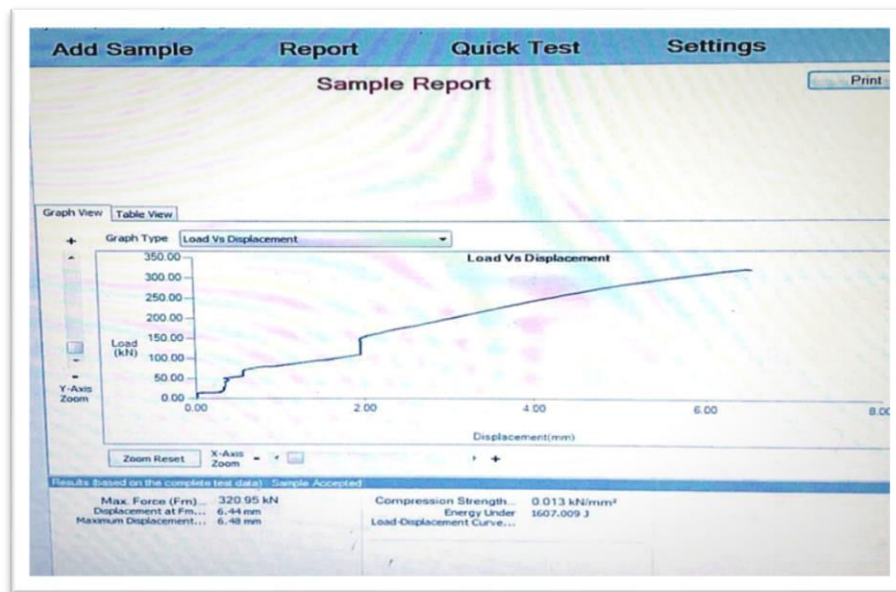
## 6. Editorial Essay: The Tumult over Transparency: Decoupling Transparency from Replication in Establishing Trustworthy Qualitative Research(2019)

Management journals are currently responding to Challenges raised by the “replication crisis” in experimental social psychology, leading to new Standards for transparency.

### IV. RESULT & CONCLUSION

Graph of compression test on fibreglass brick

- After completion of this project we will have the best optimized brick which will help in reducing the weight



and pollution.

- Lifespan of fibreglass brick is more than any type of brick.
- Load carrying capacity is high.

### REFERENCES

1. Z Yin, F Hannard, F Barthelat (Small 14 (20), 1800315, 2018), A Building Brick Principle to Create Transparent Composite Films with Multicolor Emission and Self-Healing Function
2. Zhen Yin, Florent Hannard (Science 364 (6447), 1260-1263, 2019), Impact-resistant Nacre-like transparent materials (2019) entme of the author (publication year), name of the Paper, name of journal, issn no, volume no, issue no.2 Page no.78.
3. Ultra-strong, ultra-tough, transparent, and sustainable nanocomposite films for plastic Substitute (2020)
4. Based on Mie-type electromagnetically induced transparency (EIT) effect in all-dielectric Metasurface (201) (the author states that... Qun Wu.....)
5. Precision modular microfluidics by micromilling of interlocking injection-molded Blocks (2018) (the author states that.....) 77 Massachusetts Avenue, Cambridge, Massachusetts 02139, USA
6. Essay: The Tumult over Transparency: Decoupling Transparency from Replication in Establishing Trustworthy Qualitative Research (2019) the author states Michael G. Pratt, Sarah Kaplan, Richard Whittington Science Quarterly 65 (1), 1-19



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