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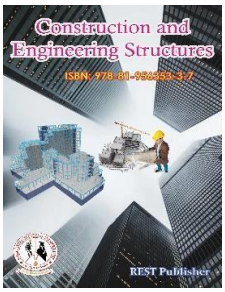

Nomex Material and Nomex Honey Comb Structure in ELECTRE Method

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Abstract: *This paper presents detailed experimental results. Paper A primer on honeycomb mechanical modelling architectures Studies always focus on stable conditions paying; Some random innovative honeycomb Based paper assembly structures their They have excellent mechanical performance and are specific Significant in recent years due to operations have received attention. The geometrically varying feature of honeycomb structures is the hollow cells that form between the thin vertical walls. The hexagonal shape of the actual honeycomb is usually the strongest shape. Advantages of Honeycomb Mixtures Exceptional strength to weight ratio. High hardness fire and fungus resistant honeycomb structures: It is found in soils ranging from 0.02 mm to 0.002 mm. ELECTRE (Elimination and Choux Traduisant La Reality - Elimination and Choice expresses reality) methods from recruitment to many realworld decision-making there are problems widely used. Transportation and more. Theoretical research on the fundamentals of electret methods is also active at this time. Alternative: Length of structure, Width of structure, Total thickness of structure, Hexagonal core height, Upper and lower sheet, longitudinal tension strength. Evaluation Preference: Population size, Number of generation, Crossover probability, Crossover distribution index. From the result it is seen that data flow testing is got the first rank where as is the Crossover distribution index is having the lowest rank.*

1. INTRODUCTION

A primer on paper honeycomb machine modelling structures Studies always focus on stable conditions paying; Some random innovative honeycomb Based on their paper honeycomb structures They have excellent mechanical performance and are specific Significant in recent years due to operations have received attention. Bee Hive, Architecture, inspired by transportation, mechanical engineering, Wide applications in various fields including chemistry Identify and first-order two-dimensional hive structures of molybdenum disulphide, using the principles investigated the electronic properties. Calculations In this study, a new broadband microwaveabsorbing honeycomb the system is designed using a new concept Fabricated. The past of beetle forewing structures based on studies, in integrated physical form an approach to making honeycomb plates we have created its honeycomb structures Due to the high strength and low weight of the vehicle and widely used in aerospace applications. Model and we structural, electronic and magnetic properties Boron-Nitride Honeycomb Structure for Study Dens- First-principles within functional theory we calculated. Future Electronics Technologies and exposed in this integrated aluminium force their potential impact on attractive phenomena It is promising to focus on are explored.

2. HONEY COMB STRUCTURE

In film production in BF structure, high Moisture and Molecular weight, and other influencing factors are used to control the morphology and properties of the basic molecules of polymer honeycomb films. Since the introduction of the BF fiction system by Francois et al. Honeycomb pictures built in BF style have received a lot of attention. Many scientists, such as Shimomura and Stencil, have done systematic work. They are BF system all types of building units Polymers Black Polymers Amplicon polygene complexes Organic-mineral hybrids Legendary-

stabilized metal nanoparticles and surfactant-bonded polyoxymethylates. They not only explored the mechanisms of image formation, but also used these films for a variety of applications, Separates membranes, erythrophicmaterials, photonic or opt Electronic Devices, Cell Culture Ft Molecules and micro-patterning Templates. Metal Oxide NPs Formation of honeycomb structure images; creating small organic molecule honeycomb-shaped images; others include images of living bacteria such as DNA, grapheme and honeycomb. [3] When FGT was introduced, it was worth exploring the energy efficiency improvement After analyzing models with different parameters of specific energy absorption and crushing power, three alternative models were established, and the system solves the hive multipurpose optimization problem using a non-dominant sorting gene. The verification results indicate somewhat improved points, the higher the energy absorption capacity the better than the uniform thickness of the honeycomb structure. [12] To improve CHF, a series of tests were the diameter of the microscopic honeycomb plate and the ratio of hole and area were determined to determine which hole. A sample was proposed Bubble removal and downstream pool boiling water supply should be considered capacity. An attempt a model was developed to illustrate the effect of honeycomb structure on CHF. Effects of honeycomb structure such as Effects of microscopic surfaces on CHF. Was the effect of honeycomb plate height explored? Using this method several expansions of CHF were achieved compared to the vacuum surface. The observed CHF expansion was illustrated using a one-dimensional model, and by examining the CHF expansion on the surface where the nanoparticles were deposited, he concluded that higher heat flux the honeycomb structure can be achieved by combining it with nana fluid. [18] The proposed method of based on solving a sequence of determined equations, without using In FEM or engineering applications for honeycomb structure design Test methods. The hive structure will withstand high strength and the hive will not collapse. Conversely, the beehive will collapse, and if we do not consider other forms of beehive failure, the final load will be the force exerted when the plastic hinge appears. [20] Method of formation of honeycomb structure the stage of formation first described with a definite double porosity is the Landing droplets sprayed on the substrate by ESSD droplets. Once the solvent is deposited, the solvent evaporates rapidly and The structure was significantly Decreases with increasing temperature. Measured resistance spectrum is only applicable to honeycomb cats with two curves from the upper and middle frequency range. Equally the solvent evaporates rapidly and Lower frequency range of the honeycomb effect is predictable at the levels of some previously announced structures. [27] Honeycomb system used internal component devices of the wall panel of a container can be dropped from the aircraft. The aluminum honeycomb structure is tested experimentally on a hexagonal aluminum plate, membrane thickness, cell dimension, and velocity of impact of compression total pressure using a drop-hammer type impact test machine. Furthermore, numerical simulations were performed in several experiments and the results were compared with the experimental ones. The hook structures the most suitable source of energy in terms of structural light. [33] Measurements on sandwich beams are of the entire structure bending stiffness and bending of laminates Determine stiffness and shear is used position of the center. Eigen frequencies and a method for predicting vibrations patterns are provided. Eigen frequencies for rectangular and orthographic sandwich plates, frequency-dependent material parameters are inferred and calculated using the Raleigh Ritz technique. [16] Nome honeycomb is inferior compared to machine of alloy or metal products. The cutting forces are not high. The low density of the Nome system is responsible for these low shear forces. The drive to grind the mixture is often overlooked as it is less than the other components of the sheer force. In our case, the hive, which uses integrated tool propulsion, represents the highest components of mechanical power. This is due to the specific geometry of the milling cutter and the strength of the honeycomb walls in the direction of compression outside the plane.

3. ELECTRE METHOD

The ELECTRE TRI-C is made up There are two compound rules, the rule of descent and the rule of ascent. This each of the rules is for a possible assignment of an action Selects only one category. Under the higher category Together they highlight the genre are used, to obtain an action may seem appropriate. Both these extreme divisions may be identical. When they differ, such allocation action may not be determined within the range of possible types, considering the way in which the set types of characteristic actions are defined. ELECTRE TRIC is the ELECTRE TRI-B in case of mismatched deployment situations where it is difficult to define boundary functions according to assumption. Defining boundary actions is often a very difficult task. [38], such alternative selective functions must meet two desired characteristics. This database includes actual alternatives; its use in analysis is real to infer accurate ELECTRE TRI models from data some about the efficiency of the proposed method Provides symptoms, its characteristics are generally difficult to reproduce in a simulated environment. Alternatives in each set are ELECTRE TRI is compiled using the method In analysis Both belief and pessimism practices. [43]. The linear dry algorithm was provided in Lorenzo & Costa (2001b) and was used to solve the surgical planning decision using the software tool built to support it is now possible to identify / confirm certain algorithm limitations. For example, the simplifications introduced in the weight-based coefficient hypothesis scheme may

override some assignment examples (alternative / classification), however, according to the current optional framework, they will receive exactly is that it does not use any dominant solutions as type reference profiles. This does not conform to the ELECTRE TRI method and further complicates the weight assumption process. Not only did this not fully comply with the ELECTRE TRI, but it also seemed to complicate the weight assumption process. [60].Fuzzy set theory addresses uncertainty Capable of handling. ELECTRE is pair wise in comparison based decision making methods is one. ELECTRE for the Employee Selection Problem the advantages of the system, with many criteria Research is needed, as are other MCDMs Investigate to find the best employee selection solution. In this study, to select the most adequate person Based on fuzzy set theory, many we attempted to design a criterion decision model. Other Unlike decision-making methods, appropriate for the job you can follow this method to find the person [22]. ELECTRE was developed along with other advanced methods I was one of the earliest multicriteria evaluation methods. The main objective of this method is multiple evaluation Synchronization option and optional in criteria the contrast option under the criteria is A desirable alternative that meets both is to choose. ELECTRE I In general three concepts consisting of, i.e. synchronous code, conflicting code and entry value. In this study, our model is ambiguous ELECTRE with opinion of decision makers Used by the decision-making body. [68]. Using the smooth ELECTRE approach, Supplier A was identified as the most suitable supplier. Because of the inherent ambiguity and ambiguity in human judgment, the crisp numbers proposed in the crisp ELECTRE have failed to solve the problem of ambiguity. In this study, the ambiguous ELECTRE method was used as an alternative to the conventional ELECTRE approach. Second, drawing a real case, this study compared and distinguished between traditional crisp and ELECTRE methods. Supplier C was found to be the most favorable supplier under the ambiguous ELECTRE approach, whereas supplier A was identified as the most suitable supplier when using the soft ELECTRE method. Supplier B, however, was found to be less favorable under both methods [77]. ELECTRE method suggests the same candidate 2 as the best choice. They come from different theoretical backgrounds and differ with many criteria decision making regimes. Since the data required for the ELECTRE method approaches are different, we do not have to expect the same result for the same employee selection problem. However, compared to the rankings obtained using the AHP method and the ELECTRE method, the best alternative and the rankings of the alternative talents in each method are very close to each other. This implies that the ranking results are necessarily the same, when the decision maker agrees with him in independently determining the data for each method. In fact, the same results were confirmed and a second candidate was selected [78]. Since vague DSS is enabled, all alternatives to the problem are evaluated under different criteria. These assessment scores can be used in an ambiguous MCDM system to reach the final ranking of alternatives that will help the decision maker make his or her final choice. In the next section of this paper, we will discuss the ambiguous MCDM systematically ambiguous ELECTRE for sequencing alternatives based on the estimates achieved by the ambiguous DSS. [79].

TABLE 1. Honey comb Structure in data set

	Length of structure	**Width of structure**	**Total thickness of structure**	**Hexagonal core height**	**Upper and lower sheet**	**Longitudinal tension strength**
Population size	750	450	89	240	73	150
Number of generation	880	470	98	242	85	120
Crossover probability	960	390	86	540	78	105
Crossover distribution index	670	380	88	276	88	212

Table 1. Shows the Alternative: Length of structure, Width of structure, Total thickness of structure, Hexagonal core height, Upper and lower sheet, longitudinal tension strength. Evaluation Preference: Population size, Number of generation, Crossover probability, Crossover distribution index.

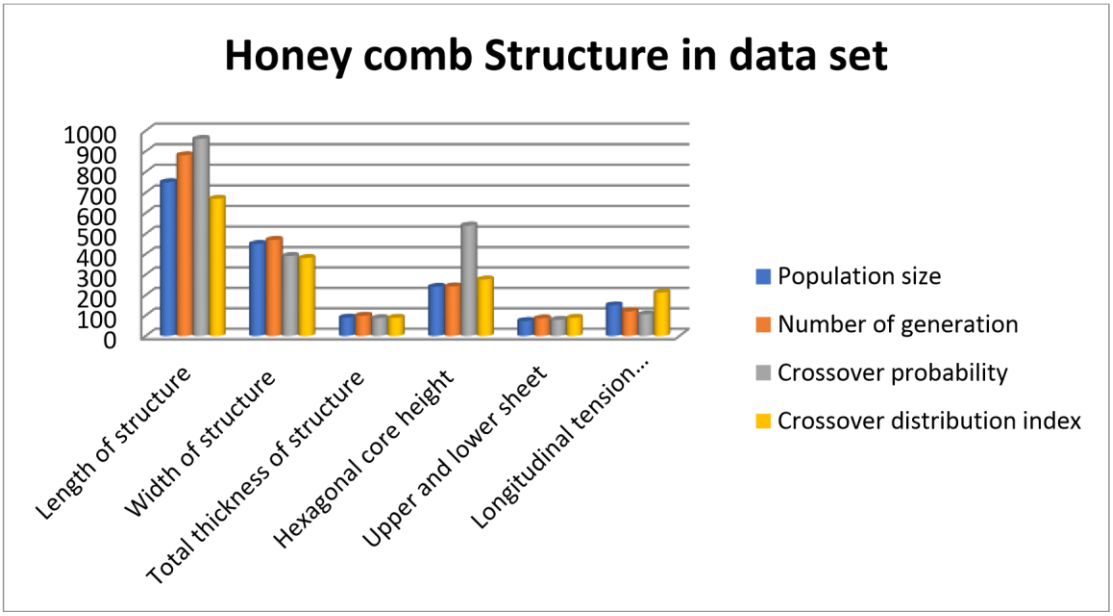

FIGURE 1. Honey comb Structure in data set

Figure 1. Shows the Alternative: Length of structure, Width of structure, Total thickness of structure, Hexagonal core height, Upper and lower sheet, longitudinal tension strength. Evaluation Preference: Population size, Number of generation, Crossover probability, Crossover distribution index.

TABLE 2. Honey comb Structure SUM & SQRT

	Length of structure	**Width of structure**	**Total thickness of structure**	**Hexagonal core height**	**Upper and lower sheet**	**Longitudinal tension strength**
Population size	562500	202500	7921	57600	5329	22500
Number of generation	774400	220900	9604	58564	7225	14400
Crossover probability	921600	152100	7396	291600	6084	11025
Crossover distribution index	448900	144400	7744	76176	7744	44944
SUM	2707400	719900	32665	483940	26382	92869
SQRT	1645.418	848.4692	180.7346	695.658	162.4254	304.7442

Table 2. Shows the Honey comb Structure SUM & SQRT value of Alternative: Length of structure, Width of structure, Total thickness of structure, Hexagonal core height, Upper and lower sheet, longitudinal tension strength. Evaluation Preference: Population size, Number of generation, Crossover probability, Crossover distribution index. This table mention the SUM & SQRT value Length of structure SUM=2707400, SQRT=1645.418. Width of structure SUM=719900, SQRT=848.4692. Total thickness of structure SUM=32665, SQRT=180.7346. Hexagonal core height SUM=483940, SQRT=695.658. Upper and lower sheet SUM=26382, SQRT= 162.4254. Longitudinal tension strength SUM=92869, SQRT=304.7442.

TABLE 3. Normalized Data Matrix

	Length of structure	**Width of structure**	**Total thickness of structure**	**Hexagonal core height**	**Upper and lower sheet**	**Longitudinal tension strength**
Population size	0.455811	0.530367	0.492435	0.344997	0.449437	0.492216
Number of generation	0.534819	0.553939	0.542232	0.347872	0.523317	0.393773
Crossover probability	0.583438	0.459651	0.475836	0.776244	0.480221	0.344551
Crossover distribution index	0.407191	0.447865	0.486902	0.396747	0.541787	0.695666

Table 3.Shows the Normalized Data Matrix of Alternative: Length of structure, Width of structure, Total thickness of structure, Hexagonal core height, Upper and lower sheet, longitudinal tension strength. Evaluation Preference: Population size, Number of generation, Crossover probability, Crossover distribution index.

TABLE 4. Weighted Normalized matrix

	Weighted Normalized matrix					
	0.2336	0.1652	0.3355	0.1021	0.0424	0.1212
	Length of structure	Width of structure	Total thickness of structure	Hexagonal core height	Upper and lower sheet	Longitudinal tension strength
Population size	0.106478	0.087617	0.165212	0.035224	0.019056	0.059657
Number of generation	0.124934	0.091511	0.181919	0.035518	0.022189	0.047725
Crossover probability	0.136291	0.075934	0.159643	0.079254	0.020361	0.04176
Crossover distribution index	0.09512	0.073987	0.163356	0.040508	0.022972	0.084315

Table 4. Shows the Weighted Normalized matrix value of the Length of structure =02336, Width of structure =0.1652, Total thickness of structure =0.3355, Hexagonal core height =0.1021, Upper and lower sheet =0.0424, Longitudinal tension strength =0.1212. Normalized Data Matrix multiplication criterion Weights this will be going to multiply again will be constant Weighted Normalized matrix value.

TABLE 5. Concordance Interval Matrix & Discordance Interval Matrix

C12 ={2}	D12 = {1,3,4,5,6}
C13 = {3,5}	D13={1,2,4,6}
C14 = {2}	D14={1,3,4,5,6}
C21={1,3,4,5,6}	D21={2}
C23={1,3,5}	D23={2,4,6}
C24={1,4}	D24={2,3,5,6}
C31={1,2,4,6}	D31={3,5}
C32={2,4,6}	D32={1,3,5}
C34={1,2,4,6}	D34={3,5}
C41={1,3,4,5,6}	D41={2}
C42={2,3,5,6}	D42={1,4}
C43={3,5}	D43={1,2,4,6}

Table 5. Shows the concordance and discordance sets A= {a,b,c,...} a may denote a finite set of alternatives, the following Two different attribute sets in the formula concordance interval set (Cab) and discordance interval set (Dab).

Coherence to describe the dominant query the interval set is used

$$C_{ab}=\{ j|x_{aj}\geq x_{bj}\}$$

Contrast Interval Set (Dab)

$$D= \{j|x_{aj}\geq x_{bj}\} = J\text{-}C_{ab}$$

TABLE 6. Synchronization

0	0	0	0	0	1
0	1	1	0	0	1
1	1	1	0	0	0
1	1	1	1	1	0
0	1	1	0	1	1
1	1	1	0	0	0
1	0	0	1	1	0
1	0	0	1	0	0
1	1	0	1	0	0

Table 6Shows the Concordance =IF(I12>=I13,1,0).

TABLE 7. Concordance Interval Matrix

Concordance Interval Matrix					
	Population size	Number of generation	Crossover probability	Crossover distribution index	
Population size	0	0.1652	0.3779	0.1652	0.7083
Number of generation	0.8348	0	0.6115	0.3357	1.782
Crossover probability	0.6221	0.3885	0	0.6221	1.6327
Crossover distribution index	0.8348	0.6643	0.3779	0	1.877
	2.2917	1.218	1.3673	1.123	6
	c bar				0.5

TABLE 8. Concordance Index Matrix

Concordance Index Matrix				
	Population size	Number of generation	Crossover probability	Crossover distribution index
Population size	0	0	0	0
Number of generation	1	0	1	0
Crossover probability	1	0	0	1
Crossover distribution index	1	1	0	0

TABLE 9. Discordance

	Length of structure	Width of structure	Total thickness of structure	Hexagonal core height	Upper and lower sheet	Longitudinal tension strength
D12	0.018456	0.003894	0.016707	0.000294	0.003133	0.011931
	1					
D13	0.029814	0.011682	0.005569	0.04403	0.001305	0.017897
	1					
D14	0.011358	0.013629	0.001856	0.005284	0.003916	0.024658
	1					

D21	0.018456	0.003894	0.016707	0.000294	0.003133	0.011931
	0.210991					
D23	0.011358	0.015576	0.022276	0.043737	0.001827	0.005966
	1					
D24	0.029814	0.017523	0.018563	0.00499	0.000783	0.036589
	1					
D31	0.029814	0.011682	0.005569	0.04403	0.001305	0.017897
	0.12648					
D32	0.011358	0.015576	0.022276	0.043737	0.001827	0.005966
	0.509315					
D34	0.041171	0.001947	0.003713	0.038747	0.00261	0.042555
	0.087243					
D41	0.011358	0.013629	0.001856	0.005284	0.003916	0.024658
	0.55273					
D42	0.029814	0.017523	0.018563	0.00499	0.000783	0.036589
	0.814818					
D43	0.041171	0.001947	0.003713	0.038747	0.00261	0.042555
	1					

TABLE 10. Discordance Index matrix

Discordance Interval Matrix					
	Population size	Number of generation	Crossover probability	Crossover distribution index	
Population size	0	1	1	1	3
Number of generation	0.210991	0	1	1	2.210991
Crossover probability	0.12648	0.509315	0	0.087243	0.723038
Crossover distribution index	0.55273	0.814818	1	0	2.367548
	0.890201	2.324133	3	2.087243	8.301577
d bar					0.691798

TABLE 11. Net superior value & Rank

	Net superior value (Concordance Interval Matrix)	Rank	Net Inferior Value (Discordance Interval Matrix)	Rank
Population size	-1.5834	4	2.109799	4
Number of generation	0.564	2	-0.11314	2
Crossover probability	0.2654	3	-2.27696	3
Crossover distribution index	0.754	1	0.280305	1

Table 12 Shows the Net superior value & Rank of the Net superior value (Concordance Interval Matrix) Rank Population size is in 4^{td} rank, Number of generation is in 2nd rank, basis path testing is in 3rd rank, Crossover probability is in 1st rank. Net Inferior Value (Discordance Interval Matrix) Rank control flow testing is in 4^{td} rank, branch testing is in 2nd rank, basis path testing is in 3rd rank, Crossover distribution index is in 1st rank.

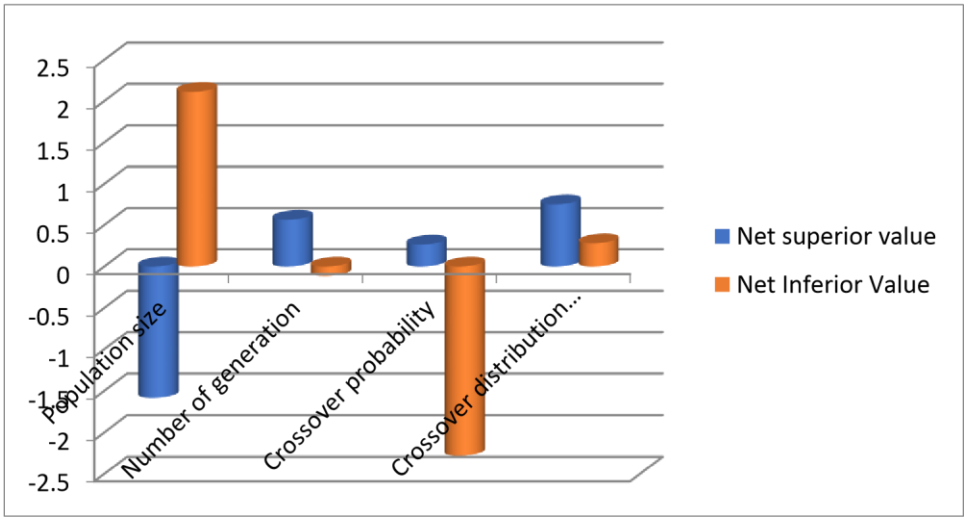

FIGURE 2. Net superior value

Figure 3 shows the graphical representation Net superior value of the Net superior value (Concordance Interval Matrix) Crossover distribution index -1.5834, Number of generation 0.564, Crossover probability 0.2654, and Population size 0.754. Net Inferior Value (Discordance Interval Matrix) Crossover distribution index 1.378762, Number of generation -0.817, Crossover probability 0.083059, Population sizeshe-0.64482

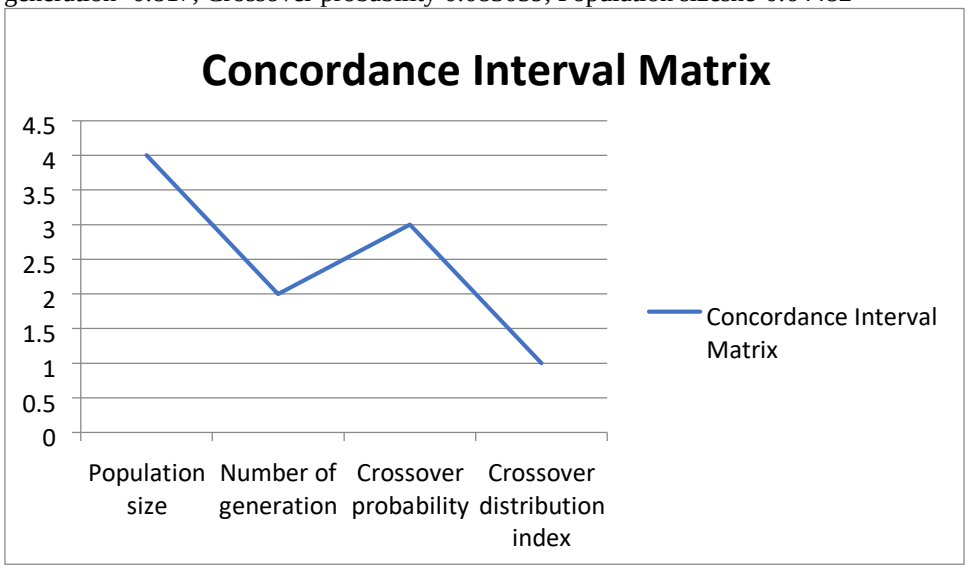

FIGURE 3. Concordance Interval Matrix

Figure 3 shows the Honey comb Structure Concordance Interval Matrix Rank value of the Population size is in 4^{td} rank, Number of generation is in 2nd rank, Crossover probability is in 3rd rank, Crossover distribution index is in 1st rank

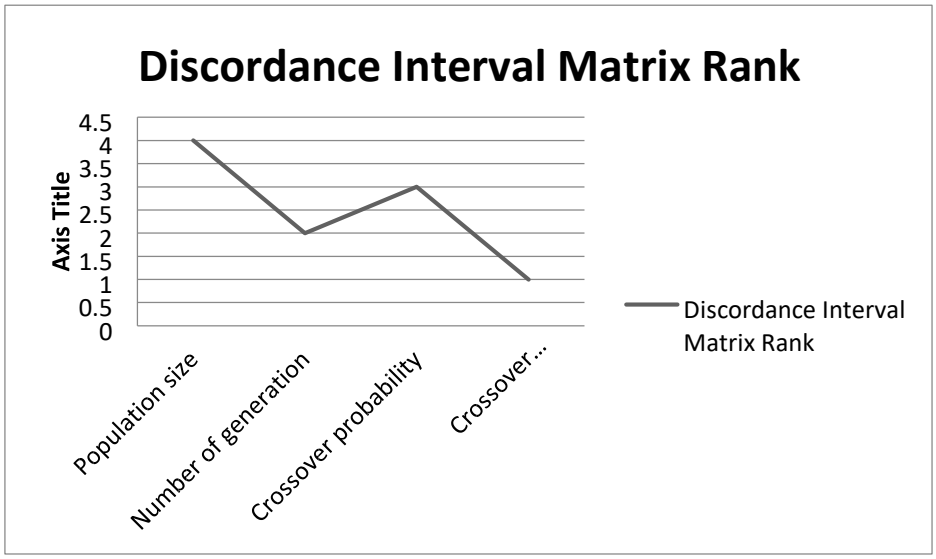

FIGURE 4. Discordance Interval Matrix

Figure 3 shows the Honey comb Structure Concordance Interval Matrix Rank value of the Population size is in 4^{td} rank, Number of generation is in 2nd rank, Crossover probability is in 3rd rank, Crossover distribution index is in 1st rank.

4. CONCLUSION

Method of formation of honeycomb structure the stage of formation first described with a definite double porosity is the Landing droplets sprayed on the substrate by ESSD droplets. Once the solvent is deposited, the solvent evaporates rapidly and the structure was significantly Decreases with increasing temperature. Measured resistance spectrum is only applicable to honeycomb cats with two curves from the upper and middle frequency range. Equally the solvent evaporates rapidly and Lower frequency range of the honeycomb effect is predictable at the levels of some previously announced structures. Such alternative selective functions must meet two desired characteristics. This database includes actual alternatives; its use in analysis is real to infer accurate ELECTRE TRI models from data some about the efficiency of the proposed method Provides symptoms, its characteristics are generally difficult to reproduce in a simulated environment. Alternatives in each set are ELECTRE TRI is compiled using the method in analysis both belief and pessimism practices.

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