

**OPTIMIZING THE FORMATION OF YTTRIUM IRON GARNET (YIG) VIA  
RESPONSE SURFACE METHOD (RSM) FOR DIELECTRIC RESONATOR  
ANTENNA (DRA) APPLICATION**

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DIELECTRIC RESONATOR ANTENNA APPLICATION MADE BY SOLID  
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**by**

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## DECLARATION

I hereby declare that I am the sole author of this dissertation. This is a true copy of the dissertation, including any required final revisions, as accepted by my examiners. It has not previously submitted for the basis of the award of any degree or diploma or other similar title of this for any other diploma/examining body or university. I understand that my dissertation may be made electronically available to the public.

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## TABLE OF CONTENTS

	<b>Page</b>
<b>ACKNOWLEDGEMENT</b>	ii
<b>TABLE OF CONTENTS</b>	iv
<b>LIST OF TABLES</b>	xi
<b>LIST OF FIGURES</b>	xiv
<b>LIST OF ABBREVIATION</b>	xxii
<b>LIST OF SYMBOLS</b>	xxiv
<b>ABSTRAK</b>	xxv
<b>ABSTRACT</b>	xxvii
<b>CHAPTER 1 - INTRODUCTION</b>	
1.1 Introduction	1
1.2 Problem statement	5
1.3 Research objectives	8
1.4 Research approach	9
1.5 Thesis organization	10
<b>CHAPTER 2 - LITERATURE REVIEW</b>	
2.1 Background	13
2.2 Magneto-dielectric materials (MDMs)	14
2.3 Yttrium iron garnet (YIG)	16
2.4 Preparation of high purity and single phase YIG	20
2.4.1 Synthesis of high purity YIG via a wet-chemical process	21

2.4.1.1	Co-precipitation	22
2.4.1.2	Sol-gel route	25
2.4.2	Synthesis of high purity YIG via conventional solid state reaction (CSSR)	28
2.4.2.1	Various investigation on the effectiveness of process parameters in SSR	37
2.5	Solid-state reactions of YIG	42
2.5.1	Solid-solid reactions of YIG formation	43
2.5.2	Phase equilibria of garnet	50
2.6	Monitoring solid-state reactions of YIG	52
2.6.1	Thermal analysis (TA)	52
2.6.2	X-ray diffraction (XRD) techniques	52
2.7	The uses of design of experiments (DOE)	53
2.7.1	Optimization process: response surface methodology (RSM)	56
2.7.1.1	Central composite design (CCD)	58
2.7.2	Related analysis in DOE	60
2.7.2.1	Analysis of variance (ANOVA)	60
2.7.2.2	Lack of fit test (LOF)	61
2.7.2.3	Residual Analysis	62
2.7.2.4	3D plot	63
2.7.3	Related statistical software for optimization	64
2.8	The uses of YIG in various applications	65
2.8.1	Dielectric Resonator Antennas (DRA)	66
2.8.2	DRA: An overview	66
2.8.2.1	General requirements for DRA applications	67

2.8.2.2	Working principles	68
2.8.2.3	DRA shapes	68
2.8.2.4	Coupling techniques (excitation method)	71
2.8.3	Related analysis	72
2.8.4	Computer simulation technology	72

### **CHAPTER 3 - MATERIALS AND METHODS**

3.1	Introduction	74
3.2	Part 1: Raw materials characterization	76
3.3	Part 2: Optimizing the YIG formation	76
3.3.1	Defining the experimental design (DOE) parameters based on the response surface method of central composite design	78
3.3.2	Sample preparation based on statistical experimental layout	81
3.3.2.1	Composition preparation	82
3.3.2.2	Mixing of powder	82
3.3.2.3	Firing process	82
3.3.3	Materials characterization and statistical analysis of DOE	83
3.3.3.1	Qualitative and quantitative analyses of X-ray diffraction (XRD)	83
3.3.3.2	Statistical analysis and check	84
3.3.3.3	Optimization of YIG formation	84
3.4	Part 3: Kinetic and phase transformation	85
3.4.1	Methods in kinetics studies	86
3.4.2	Materials preparation	88
3.4.3	Materials characterization in kinetic studies	88



3.5	Part 4: The investigation of YIG as dielectric resonator antenna (DRA)	88
3.5.1	Sample preparation	89
3.5.1.1	Shaping process	89
3.5.1.2	Sintering process	91
3.5.2	Materials characterization	91
3.5.2.1	Density and porosity measurement through Archimedes Principle	91
3.5.2.2	Phase identification	92
3.5.2.3	Microstructural analysis	92
3.5.2.4	Dielectric analysis	93
3.5.3	Dielectric resonator antennas derived from optimized YIG (OPYIG)	94
3.5.3.1	Configuration of CST and simulation	94
3.5.3.2	Antenna properties of high frequency application	96

## **CHAPTER 4 - RESULT AND DISCUSSION**

4.1	Backgrounds	101
4.2	Part 1: Raw materials characterization	102
4.2.1	Phase identification via X-ray diffraction analysis (XRD)	102
4.2.2	Purity inspection through X-ray Fluorescence analysis (XRF)	103
4.2.3	Particle size confirmation by particle size analyzer	104
4.2.4	Summary	105
4.3	Part 2: Optimizing the formation of high purity YIG	105
4.3.1	Quantitative and qualitative analysis of XRD	105

4.3.2	Model adequacy checking	110
4.3.2.1	Regression model significance test (RMS)	110
4.3.2.2	Lack of fit test (LOF)	112
4.3.2.3	Residual analysis	113
4.3.3	Confirmatory experiments	116
4.3.4	3D surface and contour plot	117
4.3.5	Optimization of YIG formation via Deringer's function	118
4.3.6	Summary	119
4.4	Part 3: Kinetics and mechanism of phase formation	120
4.4.1	Stage 1: The solid-solid reaction of $\text{Fe}_2\text{O}_3\text{-Y}_2\text{O}_3$ with various reaction temperature	121
4.4.1.1	XRD analysis of the formation temperature effect on the formation of high purity YIG	121
4.4.1.2	Quantitative analysis	129
4.4.1.3	Kinetic consideration and analysis	134
4.4.1.4	Activation energy ( $E_a$ )	144
4.4.1.5	Formation mechanism in $\text{Fe}_2\text{O}_3\text{-Y}_2\text{O}_3$ mixtures; influence of the formation temperature on the phase transformation route in YIG	147
4.4.1.6	Summary	150
4.4.2	Stage 2: The solid-solid reaction of $\text{Fe}_2\text{O}_3\text{-Y}_2\text{O}_3$ with various particle size of $\text{Fe}_2\text{O}_3$	151
4.4.2.1	XRD analysis of particle sizes effect on the formation of high purity YIG	152
4.4.2.2	Quantitative analysis	157

4.4.2.3	Kinetic consideration and analysis	161
4.4.2.4	Activation energy (Ea)	162
4.4.2.5	Formation mechanism in Fe <sub>2</sub> O <sub>3</sub> -Y <sub>2</sub> O <sub>3</sub> mixtures; influence of the Fe <sub>2</sub> O <sub>3</sub> on the phase transformation route in YIG	164
4.4.2.6	Summary	165
4.4.3	Stage 3: The solid-solid reaction of Fe <sub>2</sub> O <sub>3</sub> -Y <sub>2</sub> O <sub>3</sub> with various amounts of excess Fe <sub>2</sub> O <sub>3</sub>	166
4.4.3.1	XRD analysis on the effect of excess Fe <sub>2</sub> O <sub>3</sub> in the formation of high purity YIG	166
4.4.3.2	Quantitative Analysis	172
4.4.3.3	Kinetic consideration and analysis	175
4.4.3.4	Activation energy (Ea)	176
4.4.3.5	Formation mechanism in Fe <sub>2</sub> O <sub>3</sub> -Y <sub>2</sub> O <sub>3</sub> mixtures; influence of the excess Fe <sub>2</sub> O <sub>3</sub> on the phase transformation route in YIG	177
4.4.3.6	Summary	179
4.5	Part 4: High density YIG for high frequency (1-20 GHz) DRA Applications	180
4.5.1	Firing optimization; Sintering and grain growth of OPYIG with various sintering temperatures for production of high density YIG ceramics	180
4.5.1.1	XRD analysis	180
4.5.1.2	Microstructure analysis	181
4.5.1.3	Density and porosity analysis	186

4.5.2	Firing optimization; Sintering and grain growth of YIG with various firing durations for production of high density YIG ceramics	189
4.5.2.1	XRD analysis	189
4.5.2.2	Microstructure analysis	190
4.5.2.3	Density and porosity analysis	192
4.5.2.4	Densification kinetics	193
4.5.2.5	Dielectric and tangent loss	195
4.5.2.6	Summary	197
4.6	Final optimization of YIG as a DRA through CST software for actual antenna applications	200
4.6.1	Parametric study by CST	201
4.6.2	Comparison between simulated and measured DRA	206
4.6.3	Smith chart	209
4.6.4	Radiation pattern	210
4.6.5	Summary	211
<b>CHAPTER 5 – CONCLUSION</b>		
5.1	Conclusion	213
5.2	Suggestion and Recommendation	214
<b>REFERENCES</b>		217
<b>LIST OF PUBLICATIONS</b>		236

## LIST OF TABLES

		<b>Page</b>
Table 2.1	Types of ferrite materials with their crystal structures (Buschow, 2012)	15
Table 2.2	Some physical properties of YIG (Helszajn, 1985)	18
Table 2.3	Site preferences for cation substitution (Valenzuela, 1994)	19
Table 2.4	Previous research works on the preparation of YIG via conventional solid-state reaction (CSSR)	40
Table 2.5	The various of kinetic models for diffusion controlled reaction	48
Table 2.6	Reports of the use RSM-DOE model in various area of studies optimizing factors	59
Table 2.7	General guide to evaluate the values of $R^2$	61
Table 2.8	Types of available software used for design of experiments (DOE)	64
Table 2.9	Basic shapes of DRA application (Petosa, 2007)	70
Table 3.1	The characteristic of initial starting raw materials	76
Table 3.2	Independent variables and their coded and uncoded levels	79
Table 3.3	The central composite design (CCD) layout with coded unit	80
Table 3.4	Properties of microstrip line (feeder)	94
Table 3.5	Dimensions of the substrate and ground plane of the microstrip board	95
Table 4.1	The XRF analyses of the investigated raw material purity	103

Table 4.2	Central composite design experiments (CCD) with responses (uncoded)	106
Table 4.3	The regression model significance (RMS) of analysis of variance (ANOVA) for second order model (CCD) for formation of high purity YIG	111
Table 4.4	Lack of fit test (LOF) of analysis of variance (ANOVA) for second order second order model (CCD) for formation of high purity YIG	112
Table 4.5	Comparison between predicted values (PV) and experimental values (EV) of formation of the high purity YIG.	116
Table 4.6	Results of the optimization process parameters and experiment	119
Table 4.7	Quantitative analysis of garnet ceramics isothermally fired from 1000 °C to 1250 °C with various heating times	130
Table 4.8	The comparison between solid-state diffusion models with various reaction times	138
Table 4.9	Quantitative analysis of garnet ceramics isothermally fired at 1200 °C with various heating times at 3 different Fe <sub>2</sub> O <sub>3</sub> particle size	160
Table 4.10	Reaction rates comparison between solid-state diffusion models based on GBH model	163
Table 4.11	Quantitative analysis of garnet ceramics isothermally fired at 1200 °C with various heating times at different percentage of excess Fe <sub>2</sub> O <sub>3</sub> added	174

Table 4.12	Reaction rates comparison between solid-state diffusion models	176
Table 4.13	The summary of OPYIG properties (i.e. microstructural, density and dielectric characteristics) at various sintering temperatures and firing durations	199
Table 4.14	The characteristic of OPYIG-6H used throughout the simulation process.	200
Table 4.15	The field distribution on meridian and equatorial plane of OPYIG-6H at two different positions	205
Table 4.16	The comparison between actual measurement and simulated pattern for OPYIG-6H at 36.0 mm distance	208

## LIST OF FIGURES

		<b>Page</b>
Figure 1.1	Formation of surface wave propagation on a silicon surface (White, 1970).	4
Figure 2.1	Typical crystal structure of garnet material, YIG (Xingtao et al., 2011)	17
Figure 2.2	Scattering light in polycrystalline ceramics (Cheng et al., 2000)	21
Figure 2.3	Basic operation involved in synthesizing single phase YIG	29
Figure 2.4	The formation of YIG investigated by Sztaniszlav et al. (1984) at formation temperature from 600 °C to 1300 °C	31
Figure 2.5	Cross-section of $Y_2O_3$ - $Fe_2O_3$ for the growth of YIG and YIP, respectively (Buscaglia et al., 1997)	34
Figure 2.6	The illustrated diffusion controlled based on Jander kinetic model	46
Figure 2.7	The binary phase diagrams of Y-Fe-O under air atmosphere (Perrot, 2009)	51
Figure 2.8	Experimental planing using DOE (Grady and Lu, 2006)	55
Figure 2.9	Examples of a) 2-level, and b) 3-level with two investigated factors (Thuy and Kang, 2010)	55
Figure 2.10	The normal probability plot (Gottipati and Mishra, 2010)	62
Figure 2.11	3D surface plot as a function of two factors, (a) maximum response, (b) no exact maximum or minimum response, and (c) plateau response, respectively (Hibbert, 2012).	63



Figure 2.12	The effect of dielectric properties on the frequency (Kao, 2004)	68
Figure 2.13	The variation of DRA in shapes and size (Luk and Leung, 2003)	69
Figure 2.14	(a) The indirect and, (b) indirect coupling between feeder and DRA through microstrip direct feed (Petosa 2007).	72
Figure 2.15	Example of Computer Simulation Technology (CST) interface	73
Figure 3.1	General framework the research parts	75
Figure 3.2	Experimental flow in the optimization of YIG formation using DOE Expert Design software	77
Figure 3.3	The firing profile in optimizing the formation of YIG through experimental design	83
Figure 3.4	Experimental flow for Part 3 to investigate in the kinetic and phase transformation study which consist of 3 different stages, respectively	85
Figure 3.5	The firing profile of the kinetic and phase transformation studies	87
Figure 3.6	The flow chart of YIG as a dielectric resonator antenna application	90
Figure 3.7	Shaping process	91
Figure 3.8	Dielectric measurement of YIG ceramic via performance probe externally attached to the network analyzer	93
Figure 3.9	Construction of microstrip antenna using CST-Suite Studio (2008), (a) top view and (b) side view, respectively	95

Figure 3.10	(a) The schematic diagrams of the DRA measurements using a network analyzer associated with (b) the actual DRA position and (c) DRA illustration, respectively	97
Figure 3.11	The measurement of DRA radiation pattern at (a) E-plane cut and (b) H-plane cut, respectively	99
Figure 4.1	The XRD analyses of starting raw materials; F1 to F5 ( $\text{Fe}_2\text{O}_3$ ) and Y ( $\text{Y}_2\text{O}_3$ ), respectively	102
Figure 4.2	Particle size distribution of starting raw materials	104
Figure 4.3	The plot of yield (%) versus number of runs order for various investigated factors	107
Figure 4.4	XRD analysis of 20 samples runs with different calcination temperatures ( $^{\circ}\text{C}$ ), concentration of reactant (wt.% of $\text{Fe}_2\text{O}_3$ ), and particle size of $\text{Fe}_2\text{O}_3$ reactant ( $\mu\text{m}$ ).	107
Figure 4.5	Residual distribution analysis, (a) normal probability plots of residual, (b) plot of residual versus number of observation order, and (c) plots of residual versus predicted, respectively.	114
Figure 4.6	3 dimensional (3D) surface plots of YIG phase with various interaction factors of (a) A-B, (b) A-C and, (c) B-C, respectively	116
Figure 4.7	Phase formation of YIG ceramics at the $1000^{\circ}\text{C}$ with various reaction times ranging from 5 to 360 minutes, respectively	122
Figure 4.8	Phase formation of YIG ceramics at the $1100^{\circ}\text{C}$ with various reaction times ranging from 5 to 360 minutes, respectively	123
Figure 4.9	Phase formation of YIG ceramics at the $1150^{\circ}\text{C}$ with various reaction times ranging from 5 to 360 minutes, respectively	124

Figure 4.10	Phase formation of YIG ceramics at the 1200 °C with various reaction times ranging from 5 to 360 minutes, respectively	125
Figure 4.11	Phase formation of YIG ceramics at the 1250 °C with various reaction times ranging from 5 to 360 minutes, respectively	126
Figure 4.12	A standard curve of fraction reacted YIG phase (%) between 5Fe <sub>2</sub> O <sub>3</sub> and 3Y <sub>2</sub> O <sub>3</sub> mixtures obtained through Young's refinement method	131
Figure 4.13	The percentage of phases present in YIG ceramics fired at 1420 °C at various reaction times	133
Figure 4.14	Data fitted by the Jander model for various reaction times	135
Figure 4.15	Data fitted by the Ginstling-Brounshtein-Habert (GBH) model for various reaction times	138
Figure 4.16	Data fitted by the Zhuralev, Lesotkin and Tempelmen (ZLT) model for various reaction times	140
Figure 4.17	Data fitted by the core shrinking model (CSM) for various reaction times	142
Figure 4.18	Data fitted by the nucleation and growth for various reaction times	143
Figure 4.19	Reaction rate constant versus reciprocal temperature based on the GBH diffusion model	145
Figure 4.20	The calculated Ea based on the linearize Arrhenius equation	146
Figure 4.21	Mechanism for the phase transformation of YIP phase to YIG phase from the combined mixtures of Y <sub>2</sub> O <sub>3</sub> and Fe <sub>2</sub> O <sub>3</sub>	149
Figure 4.22	Phase formation between the reaction of Fe <sub>2</sub> O <sub>3</sub> (5 μm) and Y <sub>2</sub> O <sub>3</sub> (9.4 μm) heated at 1200 °C with various reaction times.	153

Figure 4.23	Phase formation between the reaction of $\text{Fe}_2\text{O}_3$ (48 $\mu\text{m}$ ) and $\text{Y}_2\text{O}_3$ (9.4 $\mu\text{m}$ ) heated at 1200 °C with various reaction times, respectively	154
Figure 4.24	Phase formation between the reaction of $\text{Fe}_2\text{O}_3$ (90 $\mu\text{m}$ ) and $\text{Y}_2\text{O}_3$ (9.4 $\mu\text{m}$ ) heated at 1200 °C with various reaction times, respectively	155
Figure 4.25	Quantitative X-ray phase analysis of the formation of YIG at 1200 °C for various particle sizes of $\text{Fe}_2\text{O}_3$	158
Figure 4.26	Data fitted by the Ginstling-Brounshtein-Habert (GBH) model for various reaction times at 3 different particle sizes	161
Figure 4.27	The activation energy calculated from linearize Arrhenius equation for the formation of YIG at various particle size	163
Figure 4.28	The illustrated YIG formation with three different $\text{Fe}_2\text{O}_3$ particle sizes based on GBH model, (a) 5 $\mu\text{m}$ , (b) 48 $\mu\text{m}$ and, 100 $\mu\text{m}$ , respectively	165
Figure 4.29	Phase formation between the reaction of $3\text{Fe}_2\text{O}_3: 5\text{Y}_2\text{O}_3$ with the addition of 5 wt.% excess $\text{Fe}_2\text{O}_3$ heated at 1200 °C with various reaction times, respectively	168
Figure 4.30	Phase formation between the reaction of $3\text{Fe}_2\text{O}_3: 5\text{Y}_2\text{O}_3$ with the addition of 8 wt.% excess $\text{Fe}_2\text{O}_3$ heated at 1200 °C with various reaction times, respectively	169
Figure 4.31	Phase formation between the reaction of $3\text{Fe}_2\text{O}_3: 5\text{Y}_2\text{O}_3$ with the addition of 10 wt.% excess $\text{Fe}_2\text{O}_3$ heated at 1200 °C with various reaction times, respectively	171

Figure 4.32	Quantitative X-ray phase analysis of the formation single phase YIG at 1200 °C for various addition of excess Fe <sub>2</sub> O <sub>3</sub> in YIG composition	172
Figure 4.33	Data fitted by the Ginstling-Brounshtein-Habert model for various reaction times at 4 different excess Fe <sub>2</sub> O <sub>3</sub>	175
Figure 4.34	The activation energy calculated from linearize Arrhenius equation for the formation of YIG at various excess Fe <sub>2</sub> O <sub>3</sub>	177
Figure 4.35	The illustrated YIG formation with the addition of excess Fe <sub>2</sub> O <sub>3</sub>	178
Figure 4.36	The XRD pattern of OPYIG sintered with various sintering temperatures at 2 hours of firing durations	181
Figure 4.37	The microstructures evolution of OPYIG with various sintering temperatures (a) 1350 °C, (b) 1380 °C, (c) 1400 °C and, (d) 1420 °C at 2 hours of firing durations, respectively	183
Figure 4.38	a) The formation of the boundary layer, and b) mapping characteristic of OPYIG that is sintered at 1450 °C for 2 hours	185
Figure 4.39	Relationship between relative densities with grain sizes of sintered OPYIG with various sintering temperatures at 2 hours of firing duration	186
Figure 4.40	The number of pores / volumes and average pore radius of sintered OPYIG with various sintering temperatures	188
Figure 4.41	The XRD pattern of OPYIG sintered with various firing durations from 2 hours to 8 hours at 1420 °C of sintering temperature	189

Figure 4.42	Microstructures evolution of OPYIG sintered at 1420 °C with various firing durations (2, 4, 6 and, 8 hours, respectively)	191
Figure 4.43	The formation of grain boundary layer of OPYIG that sintered at 1420 °C for 8 hours of firing durations	192
Figure 4.44	Density and grain size of OPYIG sintered at 1420 °C with various firing durations	193
Figure 4.45	Densification kinetics for sintered OPYIG at various sintering temperatures and firing durations	194
Figure 4.46	The activation energy analysis for sintered OPYIG	194
Figure 4.47	Dielectric constant and tangent loss of sintered OPYIG at 1420 °C with various firing durations	195
Figure 4.48	The effect of firing durations on bulk density, porosity and grain size of OPYIG that sintered at 1420 °C	197
Figure 4.49	The direction of the DRA from feeder edge (v-axis) in determination of the strong electric and magnetic field coupling	202
Figure 4.50	The simulated $S_{11}$ results for OPYIG-6H with various positions (v-axis) from SMA port	203
Figure 4.51	Equatorial and meridian planes for dielectric resonator (Kaifej et al., 1984)	204
Figure 4.52	The comparison between actual measurement and simulated pattern for OPYIG-6H at 36.0 mm distance	207
Figure 4.53	Simulated and actual measurements of input impedance for OPYIG-6H at 36.0 mm distance	209

Figure 4.56	Simulated and measured far field radiation patterns of OPYIG-6H with 36.0 mm distance at H-plane, respectively	210
Figure 4.57	Simulated and measured far field radiation patterns of OPYIG-6H with 36.0 mm distance at E-plane, respectively	211

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## LIST OF ABBREVIATIONS

<b>ANOVA</b>	Analysis of Variance
<b>BBD</b>	Box-Behnken Design
<b>BW</b>	Bandwidth
<b>CCD</b>	Central Composite Design
<b>CSM</b>	Core Shrinking Model
<b>CSSR</b>	Conventional Solid State Reaction
<b>DF</b>	Degree of Freedom
<b>DM</b>	Dielectric Materials
<b>DOE</b>	Design of Experiments
<b>DRA</b>	Dielectric Resonator Antenna
<b>Ea</b>	Activation Energy
<b>EV</b>	Experimental Values
<b>GBH</b>	Ginstling-Brounshtein-Habert
<b>GOF</b>	Goodness of Fit
<b>IRD</b>	Incomplete Reaction Diffusion
<b>ISM</b>	Internal Standard Method
<b>JMA</b>	Johnson Mehl Avrami
<b>LOF</b>	Lack of Fit
<b>MDM</b>	Magneto-Dielectric Materials
<b>MS</b>	Mean Square
<b>Nv</b>	Number of Pores per Volume
<b>Na</b>	Pores per Unit Area
<b>OPYIG</b>	Optimized YIG