Content			Page No
List of Figures			i-vi
List of Tables			vii
List of Abbreviations / Symbols			viii-x
Preface			xi-xiii
Chapter – 1	**Introduction & Literature Survey**		**1-38**
	1	Sensor	1
	1.1	Types of sensors	3
	1.2	Classification based on recognition layer	5
	1.3	Parameters of a sensor	8
	1.4	Advantages of electrochemical sensor	9
	1.5	Generation of electrochemical sensor	10
	1.6	Need of nanomaterials for electrochemical sensors	13
	1.7	Functions of nanoparticles / nanomaterials	15
	1. 8	Convenient methods applied for chemical modification of electrode surface	20
	1.9	Literature survey on nanomaterials based sensors	21
	1.10	Need of chemically modified electrode	34
	1.11	Motivation for the thesis work	36
	1.12	Objective of the thesis	37
Chapter – 2	**Electrochemical Detection of Azidothymidine on Modified Probes based on Chitosan Stabilised Silver Nanoparticles Hybrid Material**		**39-62**
	2.1	Introduction	39
	2.2	Experimental	41
	2.3	Results and Discussion	43
	2.4	Conclusions	61
Chapter – 3	**Determination of an Anti-HIV Drug "Nevirapine" using Electro-active 2D Materials Pd@rGO Decorated with MoS_2 Quantum Dots**		**63-92**
	3.1	Introduction	63
	3.2	Experimental	66
	3.3	Results and Discussion	70
	3.4	Conclusions	91
Chapter – 4	**Simultaneous Detection of AZT and NVP on 2D Materials**		**93-102**

	Pd@rGO Decorated with MoS_2 Quantum Dots Modified SPGE	
	4.1 Introduction	93
	4.2 Experimental	94
	4.3 Results and Discussion	94
	4.4 Conclusions	102
Chapter – 5	**Pd@TTF Tailored Nanostructured Platform: Voltammetric Estimation of Ceftazidime**	**103-120**
	5.1 Introduction	103
	5.2 Experimental	106
	5.3 Results and Discussion	108
	5.4 Conclusions	119
Chapter – 6	**Summary and Future Work**	**121-126**
References		**127-155**
List of Publications		