CONTENTS

Inte	RODU	CTION			•	3. 4 .		•		٠	1	
I.	SEC	OND Q	JANTIZA	TION	•	٠	•	•		•0	3	
II.	Неі	SENBER	g and S	CHRÖ	DINGE	R Pic	rures			٠	11	
III.	Many-Fermion Systems at Absolute Zero .											
	A. Introduction and Definition of Green Functions											
	В.	Motiv	ation to	Stud	y Gree	en Fu	nction	ıs		•	16	
	C.)ne-Par						•		19	
	D.	Exact	One-Pa	rticle	Green	Fun	ctions		•		22	
	E.	The A	diabati	c The	orem,	the S	S-Mat	rix, aı	nd Gr	een		
			ctions i						•		31	
	F.		ammatic						lutior	ı .	37	
	G.		al Equa								62	
	H.		ssions f									
		-	ctron G								71	
	I.	The	Dielect							ion		
			pagator						10		79	
	J.		ligh De						•		91	
IV.	THE ELECTRON-PHONON SYSTEM AT ABSOLUTE ZERO . 10											
	A.	Gener	al Forn	nulatio	n						107	
	В.	Green	Functi	ons D	efined						116	
	C.	Exact	Phonor	Gree	n Fur	ection	ıs .				117	
	D.	Pertu	bation	Theor	y and	Diag	rams				118	
	E.	Partia	l Summ	ations	of D	iagrai	ns				119	
	F.	Effect	of Elec	tron-I	Hole S	ysten	n on P	hono	ns		124	
	G.		s of Pho							•	126	
V.	Ma	ny-Fer	MION S	YSTEM	S AT F	INITI	Е ТЕМ	PERAT	URES	•	131	
	A	Defini	tion of	G at I	inite	Tem	peratu	res	_	-	131	

CONTENTS

В.	Expressing Physical Quantities in Terms of	the	
	Green Functions		132
C.	Free One-Particle Green Functions	•	135
D.	Exact One-Particle Green Functions		136
E.	Shifting the Single-Particle Energy so $\mu = 0$		138
F.	Boundary Conditions for Green Functions-Ima	gi-	
	nary Time Green Functions		139
G.	Perturbation Theory and Diagrammatic Analysis	s.	142
	Relation between $\mathscr G$ and $ar G$	•	146
RIBI IOGE	APHY		149