

## **Table of Contents**

### **Introduction**

Ursula Klein  
Carsten Reinhardt

### **Chapter 1**

Unveiling Glass's Mysteries 1  
*Lavoisier, Loysel And The First Chemical Treatise On Glass (1765–1799)*  
Marco Beretta

### **Chapter 2**

Klaproth's Discovery Of Uranium 21  
Ursula Klein

### **Chapter 3**

Vinegar And Oil 47  
*Materials And Representation In Organic Chemistry*  
Alan J. Rocke

### **Chapter 4**

The Curious Case Of Coniine 61  
*Constructive Synthesis And Aromatic Structure Theory*  
Catherine M. Jackson

### **Chapter 5**

Alfred Nobel, "Creative Bricoleur" Who Invented A Smokeless Military Powder (Ballistite)  
103  
Seymour H. Mauskopf

### **Chapter 6**

Partial Valence, Residual Affinity, And Early Stereochemistry 141  
Peter J. Ramberg

### **Chapter 7**

Representing The Experimental Atom 171  
Charlotte Bigg

### **Chapter 8**

Reactivity And Its Contexts 203  
Stephen J. Weininger

### **Chapter 9**

Reaction Intermediates And Transition States 237  
*States Of Matter Or States Of Mind?*  
Mary Jo Nye

### **Chapter 10**

The Synergy Of New Methods And Old Concepts In Modern Chemistry 259  
Thomas Steinhauser

**Chapter 11**

Modeling The Scale Of Atoms And Bonds: The Origins Of Space-Filling Parameters 281

Jeremiah James

**Chapter 12**

The Olfactory Object 321

*Toward A History Of Smell In The 20th Century*

Carsten Reinhardt

**Chapter 13**

From Enzymes To *Molecular Machines* 343

*Materiality In Research On Rhodopsins, 1970s*

Mathias Grote

Notes On Contributors 369

Index 373