Contents

Acknowledgments ix
Foreword xi

1 Introduction: Why Is Leadership Important for Creativity in Science, Technology, and Innovation 1
SVEN HEMLIN, CARL MARTIN ALLWOOD, BEN R. MARTIN, AND MICHAEL D. MUMFORD

PART I
Theoretical Section

2 Leading Scientists and Engineers: Cognition in a Socio-technical Context 29
MICHAEL D. MUMFORD, DAVID PETERSON, AND ISSAC ROBLEDO

3 What Connects Leadership and Creativity? The Mechanisms Through Which Leaders May Influence Follower and Team Creativity 58
LEIF DENTI AND SVEN HEMLIN

4 Leadership, Innovation, and Technology: The Evolution of the Creative Process 81
SAMUEL T. HUNTER, LILY CUSHENBERY, NICOLE GINTHER, AND JOSHUA FAIRCHILD

PART II
Empirical Section

5 Academic Leadership of High-Performing Research Groups 113
MAAIKE VERBREE, INGE VAN DER WEIJDEN, AND PETER VAN DEN BESSELAAR
Contents

6 Generation and Life-Cycle Effects on Academic Leadership 149
MAAIKE VERBREE, INGE VAN DER WEIJDEN, AND PETER VAN DEN BESSELAAR

7 Time to Create: Pathways to Earlier and Later Creative Discoveries in Nobel Prize Winners 184
DAWN L. EUBANKS, MICHAEL E. PALANSKI, JUANI SWART, MICHELLE M. HAMMOND, AND JOY OGUNTEBI

PART III
Implications Section

8 Succession Planning for Scientific Positions: Identifying, Developing, and Retaining Leaders for Innovation 211
GINAMARIE S. LIGON, KATE T. DEMBROSKI, ROBYN C. MAPP, AND BIANCA M. ZONGRONE

9 Leading Interdisciplinary Creative Teams: Challenges and Solutions 240
RONI REITER-PALMON, TRIPARNA DE VREEDE, AND GERT-JAN DE VREEDE

10 Leadership and Followership in Science and Technology 268
MICHAEL E. GORMAN AND PHILIP S. GORMAN

11 Creative Leadership: Its Meaning and Value for Science, Technology, and Innovation 287
GERARD PUCCIO, MARIE MANCE, AND JEFFERY ZACKO-SMITH

12 Conclusion 316
SVEN HEMLIN, CARL MARTIN ALLWOOD, BEN R. MARTIN, AND MICHAEL D. MUMFORD

Contributors 333
Index 341