

ORGANIC CHEMISTRY 1 LECTURE GUIDE 2019

BY RHETT C. SMITH

Marketed by Proton Guru

Find additional online resources and guides at protonguru.com

Try out *Organic Chemistry 1 Primer*
and

Organic Chemistry 1 Reaction and Practice Problem Book

For concise, plain-language, study-on-your own organic help and practice

There is a lot of online video content to accompany this book at the Proton Guru YouTube Channel! Just go to YouTube and search "Proton Guru Channel" to easily find our content.

Instructors: Free PowerPoint lecture slides to accompany this text can be obtained by emailing IQ@protonguru.com from your accredited institution email account. The homepage at protonguru.com provides a link to citations to popular text books for further reading on each Lesson topic in this primer.

© 2006-2018

Executive Editor: Rhett C. Smith, Ph.D. You can reach him through our office at: IQ@protonguru.com

All rights reserved. No part of this book may be reproduced or distributed, in any form or by any means, without permission in writing from the Executive Editor. This includes but is not limited to storage or broadcast for online or distance learning courses.

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

ISBN 978-1074137434

Organic Chemistry 1 Lecture Guide 2019

By Rhett C. Smith, Ph.D.

© 2006, 2011-2019

Companion Books from the Proton Guru:

Organic Chemistry 1 Reactions and Practice Problems 2019

by Rhett C. Smith

Organic Chemistry 1 Primer 2019,

by Rhett C. Smith, Andrew G. Tennyson, and Tania Houjeiry

There are three types of intermolecular forces of focus in organic chemistry:

i. *Hydrogen Bonding*

ii. *Dipole-Dipole interactions*

iii. *van der Waals interactions* (London dispersion forces).

stronger



weaker

Notes

In a solid or liquid, it is the intermolecular forces that hold molecules close together:

In a molecular solid, energy is needed to break the molecules apart so they may flow past one another to form a liquid (melting).

In a molecular liquid, energy is needed to give the molecules enough kinetic energy to allow them to break away from the liquid surface and enter the gas phase (boiling).

It takes more energy to disrupt stronger intermolecular forces, so:

Melting point and boiling point both _____ as the
strength of intermolecular forces _____.

Notes