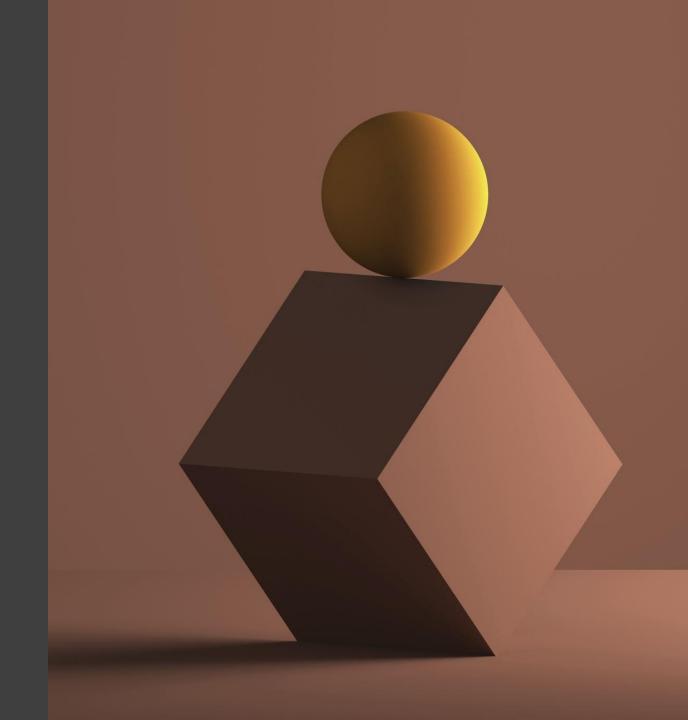
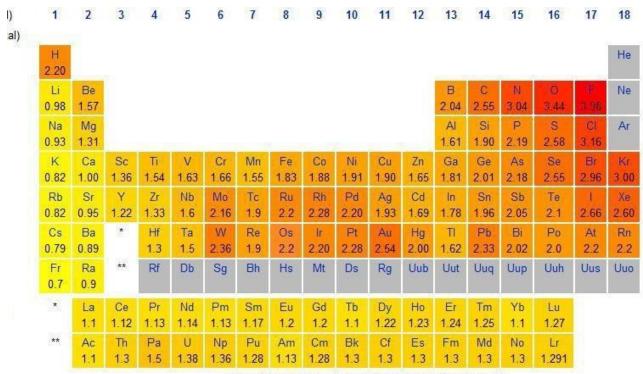
Chemical Stability

03.07.2020



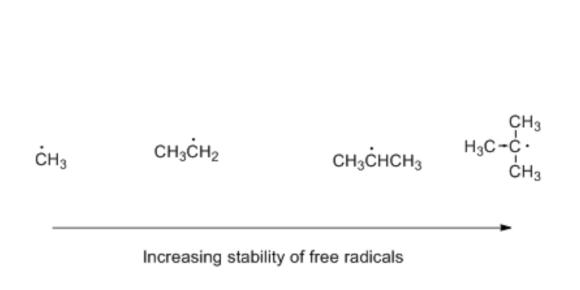
Electronegativity



Periodic table of electronegativity using the Pauling scale

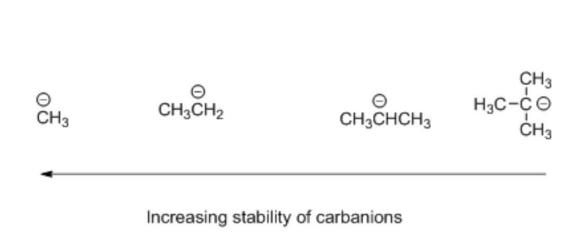
 The electronegativity of different atoms can be calculated and have values assigned to it but the general rule of thumb is that the electronegativity of atoms increases along the period and decreases down the group. This is because the atomic radius decreases along the period but the number of protons increases. The nuclear pull increases and the electrons get attracted towards the nucleus. Down the group, the radius of the atom increases and the electrons are far away and the nucleus strength is relatively weaker on the electrons that are further away from the nucleus. In the 2nd period, Fluorine is the most electronegative with the value of 3.98 and Lithium is the least electronegative with the value of 0.93. This supports the explanation given above as both Fluorine and Lithium are on the two extremes of the 2nd period.

Free radicals



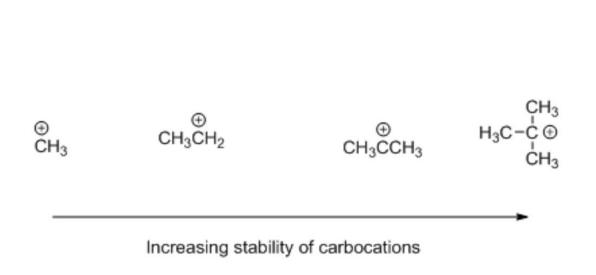
Stability order of free radicals increases as we move from primary to tertiary free radicals, due to +I effect of methyl groups there is a redistribution of lack of electron all over the molecule which reduces the intensity of lack of electron on central carbon and increases the stability of the molecule.

Carbanion



Stability order of carbanions decreases as we move from primary to tertiary anion because due to +I effect of methyl groups there is an increased intensity of negative charge or central carbon of tertiary carbanion which further makes it unstable.

Carbocations



Stability order of carbocations increases as we move from primary to tertiary cation due to +l effect of methyl groups there is a redistribution of positive charge all over the molecule which reduces the intensity of positive charge on central carbon and increases the stability of the molecule.



Video Links

Functional Groups in Under 5 Minutes - Organic Chemistry

https://www.youtube.com/watch?v=58 UO VLt3s8 (4:15)

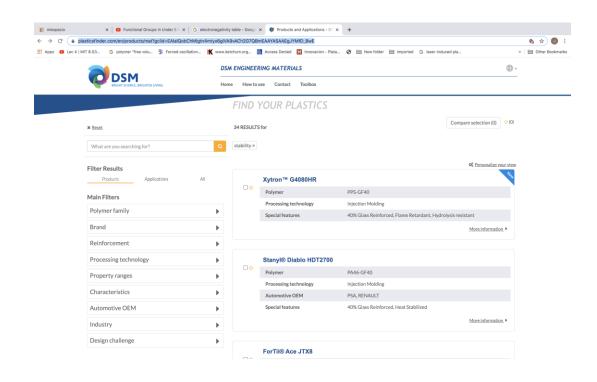
How to tell if a molecule will be reactive or not

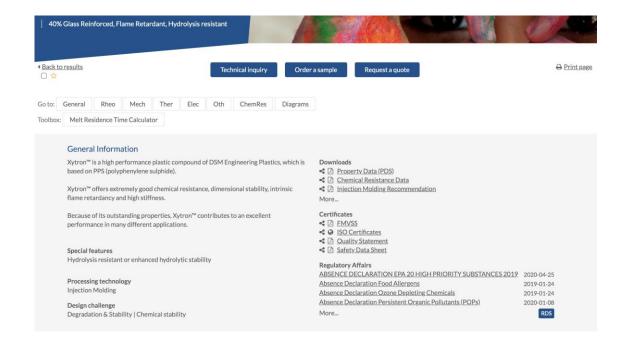
https://www.youtube.com/watch?v=I cn8jx eOmQ (5:14)



DSM ENGINEERING MATERIALS

https://plasticsfinder.com/datasheet/ForTii%C2%AE%20Ace%20JTX8/JEy49







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Polymer Properties **Database**

https://polymerdatabase.com/software.html

Polyncopyright © 2018 polymerdatabase	ner Pro	pertie	es Dat	abase			
HOME POLYME	ER DATA PO	DLYMER INFO	BOOKS	ABOUT US	OTHER	CONTACT US	
OTHER PRODUCTS Books	POLYMER PROPERTIES PREDICTION SOFTWARE						
HOME PRODUCT LINKS	The Dortmund Data Bank (short DDB) is a powerful data bank for thermodynamic and thermophysical data. One of their services is data supply for process simulation where experimental data are the basis for the design, analysis, and optimization of chemical processes. The DDB also offers software products for fitting parameters for thermodynamic models like NRTL, Wilson or UNIQUAC and for other models describing pure component properties like the Antoine equation for vapor pressure. The DDB is also used for the development and revision of predictive methods like UNIFAC, and PSRK. The DDB also offers a databank for polymer properties which covers phase equilibrium data like VLE, LLE, GLE, partition coefficients, critical data, solubilities; caloric data like heat of mixing; and P-V-T related data like volumes and densities.						
Aspen Technology Dortmunder Database							
ACD Labs	aspentech						
Pro Sim	process industri	Aspen Technology, also known as AspenTech is one of the market-leading providers of property prediction software for the chem process industries. Among many other products, it offers software for fitting parameters for thermodynamic models like Wilson, N or UNIQUAC and for other models describing component properties.					
	Aspen offers several software products for polymer modeling and polymer process simulations. Aspen Polymers includes physical property data, phase equilibria models, polymer characterization, and reaction kinetic schemes. It models a wide range of polymer processes, including polyolefins, polyesters, polyamides, and many more. Polymer process modeling in Aspen Plus has been extended so that polymers and oligomers can be treated like solids under their melting points.						
	ProS	Sim					



ProSim is a leading European engineering software company delivering chemical process simulation software and consulting services to the chemical, pharmaceutical, and other processing industries worldwide. ProSim's software solutions are used to improve process design, increase plant efficiency and reduce their impact on environment. Thanks to long term partnerships with major research centers and to substantial investment in R&D, ProSim continuously develops innovative software and has become a recognized player on the international market.



Advanced Chemistry Development, Inc., (ACD/Labs) is a software company that provides software solutions to support synthetic and



Sample records for intrinsic viscosity measurements



1. Determination of Viscosity-Average Molecular Weight of Chitosan using Intrinsic Viscosity Measurement

International Nuclear Information System (INIS)

Norzita Yacob; Norhashidah Talip; Maznah Mahmud

Molecular weight of chitosan can be determined by different techniques such as Gel Permeation Chromatography (GPC), Static Light Scattering (SLS) and intrinsic viscosity measurement. Determination of molecular weight by intrinsic viscosity measurement is a simple method for characterization of chitosan. Different concentrations of chitosan were prepared and measurement was done at room temperature. The flow time data was used to calculate the intrinsic viscosity by extrapolating the reduced viscosity to zero concentration. The value of intrinsic viscosity was then recalculated into the viscosity-average molecular weight using Mark-Houwink equation. (author)

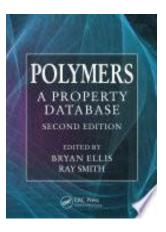
2. Determination of viscosity-average molecular weight of chitosan using intrinsic viscosity measurement

International Nuclear Information System (INIS)

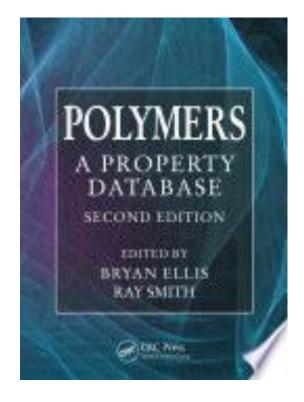
Norzita Yacob; Norhashidah Talip; Maznah Mahmud; Nurul Aizam Idayu Mat Sani; Nor Akma Samsuddin; Norafifah Ahmad Fabillah

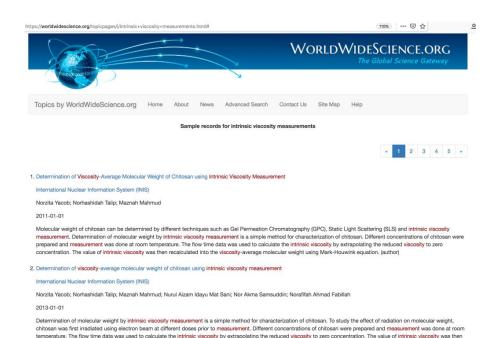
Determination of molecular weight by intrinsic viscosity measurement is a simple method for characterization of chitosan. To study the effect of radiation on molecular weight, chitosan was first irradiated using electron beam at different doses prior to measurement. Different concentrations of chitosan were prepared and measurement was done at room temperature. The flow time data was used to calculate the intrinsic viscosity by extrapolating the reduced viscosity to zero concentration. The value of intrinsic viscosity was then recalculated into the viscosity-average molecular weight using Mark-Houwink equation. (Author)

3. Study of Bovine Serum Albumin Solubility in Aqueous Solutions by Intrinsic Viscosity Measurements



Data Base





recalculated into the viscosity-average molecular weight using Mark-Houwink equation. (Author)

3. Study of Bovine Serum Albumin Solubility in Aqueous Solutions by Intrinsic Viscosity Measurements