Communicating science

Martyn Bull

ISIS Neutron and Muon Source

martyn.bull@stfc.ac.uk twitter.com/moomoobull www.isis.stfc.ac.uk twitter.com/isisneutronmuon



The academic paper

The academic paper is the primary method to share results and knowledge about science



and commercia

stay on the air

High Temperature Fatigue

ADVANCED HIGH TEMPERATURE MATERIALS:

M.R. WINSTONE*, J.W. BROOKS**

*Physical Sciences Department, Defence Science and Technology Laboratory,
Porton Down, Salirbury, Sp4 01Q, UK

** QinetiQ Ltd., Cody Technology Park, Faraborough, GU14 0LX, UK ABSTRACT: The accompine business is uninstely competitive. Ind. continental success, relies on continuous inferences of the continuous and the con destribution. Dual uni-continuous and data alloy concept, are described, implementation of more approaches required the control and of the control of the co

Kerwords: Nekel alloys, Falling, Crack growth, Thermomechanical processis

RESUMAC: A Indian's de mucios de autres é altanens competitives e sels a engagements des competits de mucios de autres de altanens competitives e sels la engagement des competits des competits de propriet de la propriet de la competit de la comp PESSUNO: A industria de lutricios de avides e altuneiras compellitivas esta à official da metorea, na centrale activado a intractora archentais e no ababacanto de activado de archentais e nos activados de lutricios de intractora archentais e nos activados de lutricios de intractora archentais e nos activados de lutricios de intractora de procurso de constante de procurso de constante de procurso de constante de la constante de procurso de lutricios de lutricios de la constante de procurso de la constante merciala avançados é un poderoso interimeiro as procura de cua de mercial.

Secuciones de miterialis para componente de modelho computacional do procura de costo de miterialis para componente de modelho computacional do proceso de modelho de dece de tribuse estus comparentes. A modeledo compaticional de puede per a medical de procesa estudiente de pr describas. A inclementa à temperatura de serviço e distribuição de tenidos subdi-modelações do processo para storaire a exercismo obtata direito tenido emaio. Pularvas chave: ligas de niquel, fadiga, crescimento de fissura, processamen

minor routine 2-17 YECHEVILEYCON

One of the Speamer engineering achievements of the second and of the 20° county was the development of mass at part of the 20° county was the development of mass are second and the second part of the se This contrasts extensive make these advance inasport. It is planed 50 years since a 6e Havilland Comer IV and the Commercial crossing of charted to the Analite by a personnel on the Commercial Commercial of Clark of the Commercial requirements ti powered asceraft. The Count of 1956 carried 76 passengers and total carrier of 25 passengers of 25 passenger Ultimately the maxinde system is depo-ment the design guarangers up to 9200miles. These advances have come induce through confusion and intentive development of gas induce through confusion with a confusion for the confusion of the conf temperature (1 nearly 700° ha

proprision systems. Table I conseares some aircraft and engines over the past 5 decades, the cauge and paysout and regimes over the past 5 decades, the cauge and paysout and paysout and paysout and paysout a state of \$4, where the cauge are paysout and paysout a state of \$4, where the paysout and paysout a state of \$4, where the paysout and paysout technologies for a capability of a increases by approximately a factor of 4, whereas is, these has increased by nearly an order of magnitude. applications. Pethage even more contribute has been the increase in tuel 400°, has been Perhaps even more remarkable has been the increase in such efficiency. Figure 1974 and consumption that of copped by 2016 concept the extra 1970 and this improvement is prefixed to consume the extra 1970 and the improvement of the extra 1970 and the extra 1970 process develo processes, but single crystal p Since the early 1970's and this improvement, is predicted to containe. Major crackward in action and emissions are contained and emission of the emission and emission of containing the emissi minimising the environmental impact and escongarinal relatively is achieved continuely to ensure planetual personal

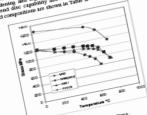
Chincin a Tecnologia dos Melecials, Vol. 20, n * 12, 200 8

Table 2. Chemical composition of some typical turbine disc uses

h Teatry	- A
h Temposition of such	W Tn
ble 2. Chemic	Mo "
Alloy Ni Fe Co	130510
Alloy 30.7098	11.20
100 max	411 3 1 1 4
	18 43 - 3
Nin001 45.0 19 0.4 Bal 19 13.5	190 + 40
	14.9 3.5 3.5 2.1
IN718 Bal 16.9 Waspaloy Bal 8.0	
Waspaloy Bal 8.9 API Bal 308 14.57	122 - 22-14
7.005 01 000 140	1435 52
100 100 100	13.1 6.44 1.9
U7300 Bal 1.0 13.A	3.5
RR1000 Est 13.A	13.1 bu
N18 Bal	well and tes
ME3	certomed very well and be

Were relatively 10%, seed discs performed very well and Were relatively tow, sized discs performed very well and were used extensively in gas unclose engine. Typical among the sized turbuse disc alloys is FV555 (Table 2)

teed in the Roll-Royce Anna capitals. Good strength is seed in the Bolle-Royce Avon engines. Good strength is minimized up to about 4,00°C (Figure 3). However, strength and ordinate resistant of the topic of the topic strength of the property of the topic Hence by the middle of the 1960's sleet sixthine discs seeds being disclased by NLFs systems such as 15718 and 1592 The high NI contents statistical an americise constantances. The high NI content stabilised an austerack: crystal storage and precipitation based and provided greater centariant and provided greater centariant and high temperatures and great microarchicular architectures. The 1970's some meteors between to they are detornation at high temperatures and good unconstructural stability. The 1976's 500°C stable to the consumer t 24.Fe attoys was poor. Ni attoys sids increased pencipition to increasing and higher thermal stability neer introduced to increase and higher thermal stability neer introduced the control of the contro extend disc capability above 600°C. and compositions are shown in Table 2.



results in some coarse primary y particles (1.-\$am) at the grain boundaries, which helps maintain a fine grain see (5.-\$am) at the coarse postation and the grain see (5.-\$am) at the proposition of secondary particles (100.500m), which provides most of secondary particles (100.500m), which provides most of the removerance cusohistic turestee with fine tender and the provides of th Fig. 3. Ultimate strength of typical disc alloys. FORCEMENT the series of 50 alloys from Wasquidy to ME 8 K can be seen that the concentration of a terration observed. Following the series of Na stroys from Wagnilovy in ME3 it can be seen that the concentration of \(\gamma \) in forming elements of AT. Tr. To and refined the Med. Med. With the concentration of Med. With this been determined by the series of the strong of the strong determined by the series of the se

TF K

Many processes have been propused for the production of out microtarcture discs [19]. All opeys software to allow a principle, best the fin above the y-software to allow the controlled prognostion of the pain size until the seeding the controlled prognostion of the pain size until the seeding the principle, best the rim above the γ' solves to allow a consolided confriends of the grid after white knoping the bore below the γ' solves to solve the property of the principle of the princ However, the practical implementation this base treatment process needs to be kept as simple mean constitution on the control of the control on the control of the control on the control of the control process needs to be noted as anyther thermal conditions mitrations to close control on the conditions of the close control conditions of the close control conditions. Bulk-Royce metals for a condition of the close necessary for accurate microstructural control, isother-toyee ple and Ladish Co. Inc. have developed a process that uses to and Lagret Co. Her takes developed a process unit their lagret lagret and controlled temperature. Similar developed a process unit their lagret la an instituted heat shak to create a controlled temperature.

distribution across the doc forging desired the soliton but of the foreign is represented by an another institute of the foreign is represented by an another institute of the foreign is represented by an another institute of the foreign is represented by an another institute of the foreign is represented by an another institute of the foreign is represented by an another institute of the foreign is represented by an another institute of the foreign is represented by the foreign is a supplied to the foreign in the foreign in the foreign is the foreign in the foreign is a supplied to the foreign in the foreign in the foreign in the foreign is a supplied to the foreign in th treatment process. This is shown schemutically as Figure 15.
The created action of the copying is surrounded by the constant of the copying is surrounded by the constant of the copying is the copy of the copying in the capy is the capy of the copying in the capy in the capy is the capy of the cap monisors clock concauses a new anne, out us mit of the disc is exposed. When the pack is placed in a turned shore we's exposed, when the pack is placed in a turned shore when we's other the first us onlikely the y' alteredises and duc is exposed. When the pack to placed in a finance shows the 'p' solves the clin bests up quickly, the 'p' solves the clin bests up quickly, the 'p' solves the clin bests up quickly, the 'p' solves of the country o the y' solves the rien heats up quickly, the y' dissolves and the grain size can increase. However the bote of the distribution are much more showth and the each is removed from best up much more showth and the each is removed from the Stila size can increase. However the bore of the disc tests up much more showly and the pack is removed from the forecast submy the bore base combined more submy the bore base. nexts up out on more sownly and me pack to conserve from the former wints the Europe has reached the sub-option street former temperature, true, commention, that true order above or the furnace when the bore has reached the sub-solvus heat the furnace temperature, thus preserving the fine grain size of the furnace.

disc forging TONY THOUATTE PAD

Fig. 18. Diagram of the heat treatment Fock for development of a dask automateurs of 1st.

Although the concept of this process is quite simple, the periodical supplementation requires a very precise terroriedge of the tensional timestemperature cycle expressions on the language of the tensional timestemperature cycle expression and the interest that this like on the content of t one material and the influence that this has on the influence that the base of the orientation that the disc. (Figure 19), II is not constructed that the disc. (Figure 19), II is not constructed that the disc. (Figure 19), II is not constructed that the disc. (Figure 19), II is not constructed to the disc. (Figure 19 SECUREDLY TO CASCUME USE MENTING FROM THE PROPERTY OF THE PROP treatment and model, both one dissolution of the \(\gamma^*\) and the kardest of the grain fromth to ensure the first of the construction in the first of the construction is achieved the post of the construction in the fact is critical to of the conserve to face grain transition in the data is critical to subject the lowest muse, most efficient denies.

of the cooses to fine grain transition in the duc k achieving the lowest mass, most efficient design. Beyond the Gust microstructure concept there is is also the Beyond the datal microstructure concept there is is also the possibility of principle the chemical composition of the possibility of principle in the chemical composition of possibility of principle in the chemical construction of possibility of principles of the manufacture of possibility of principles of the manufacture of possibility of principles of the principles of possibility of principles of the principles of principles of the principle Several proposed techniques for the manufacture of qual alony discs are described in References 20-21. Figure 30-alonys to example of a soul alloy due made by HIP bonding a course grain U720LC dril to a fine grain FM U720 boses.

get deformanced account the Y solvin temperature contends to the State of the State

deformation around the Y Solvita temperature contends with a sub-colvan source treatment temperature with the sub-colvan source treatment temperature. With the residence of the sub-colvan sub-colvan yellow parts of the sub-colvan s

of secondary particles (100,500am), which provides most of the temperature capability, together with fine tentary percipitates (10,500m) for administrational strength.

Chincin a Tecnologia dos Malacidas, Vol. 20, n. + 52, 200 8



FNs. 19. Finished forging with data microsinucture (coarse grained not, for grained bore)

A seed step may be to bond the single crystal blades to the disc to born a farther biller. This removes the parts/lic mass for the few there not expert mass conjugate the strengt on the same. office to Seema sufficient tillier. This removes the parasytic mass as of the fee most fixing that necessary the parasytic mass and feeling that necessary the entire that the seeman sufficient demonstrates the seeman sufficient demonstrates that the seeman sufficient sufficie

Fig. 20. Microstructure and bondline in with a coasse grain rim and fine grain bore

fig. 21. Demonstration blink with Mi dummy blades integrally bonded to a fine (

7, CONCLUDING REMARKS The metallispical technology applied to his turbine duces has always been at the cutting turnine tracs has always been at the cutting combination of severe stress/emperature requirements, minimum weight and the sail requirements, minimum weight and the sail of the components has cliven alloy and limit. Recent developments have seen a limit. Beent development have seen a seed and wrought nickel alloys to higher alloys that continue excellent strength and environmental resistance. The compil-tation of the continue of t and enviconmental resumance, the complete systems and the high sensitivity to process processing the development of matter processing the development of matter processing the development of the processing the pr provide strong support for the design at air initial alloy design through to the po

[10] C. A. Diades, S. M. Reed, Mat. Sci & To M.R. Winstone and J.L. Brooks stresses and estimation of in-service R. P. Guest, "T. Recrystallization Incomel 715", Phil machusing stresses and estatusica of in-pervise performance. The operating temperature of undirections and personal pers advanced engines exceeds 700° so max creep and environment interactions have a large influence on the payment to (2005) P. Guest and Recrystallization Decivatives 2003

Guest, R.P. an

Transformation during Hot

Derivatives 2

I. M. WIK

Hardy,

Duclin, Minerals

Orbin

"Eff

The modelling wolk have enabled a far better understanding of the the 'preventers' between the allow, the encodes and The modeling took have enged a me return unaccessanted for the the labercooks between the alloy, the process and of the the interactions between the alloy, the process, easi, one properties such that is now possible to despond the process that have their microarrantee management to the process that have their microarrantee management.

convenees that have their microatracture anothfield locally to relist the dominant total damage mechanisms of the paper has demonstrated the dominant total damage mechanisms of the paper has demonstrated to the strength the paper last of the microatracture turbine duc where the paper last of the microatracture are varied to best result high and low emperature localing. [14] H. K. D. H. I

[15] P. L. Black Sci. & Tech Thinks are due to the UE Ministry of Defence and GarettQ.

1.1.1. for financial support of various superior of this work.

The ambient support of various defence of Rolls-Royce plc
for this active and participation in discussions.

REFERENCES

"The Jet Engine", Published by Rolls-Royce pk.

R. C. Reed, "The Superalitys: Fundamentals and Applications," Cambridge University Press, 2006

M. R. Wastone and G. F. Harrison, Facque Lifting M. F. Wastone and G. F. Harrison, "Faligue Lifting Methodatogies for Aerocatigue Discs and the Erect of Methodatogies for Aerocatigues Conference on Samuel States," in Puring and Conference on Samuel States of Samuel States

 A. Kennangur, D. Eyank, R. Sidani, P. D. Lee and M. R. Schaller, "Ericci of Process amount are to ending of Succious Personal and Succious Personal and Succious Personal and Superior Supe CREERS 2005, NUMBER, FERROR, SEE, 22-23, (EE LEE, P.D., NICCHEI, A., Bellot, J.P., Janly, A.), 281, SF234, 19-49.

W, Wang, P. D. Lee and M. McLean, Acta Mal. 51, (2003) 2971.

A. Kermangur, W. Wang, P. D. Lee and M. McLean, Mal. Sci. and Tech. 19 (2005) 859.

C. Medelros, Y. V. R. K. Prasad, W. G. Fenzier and S. C. DEBURIOS, Y. Y. E. E. PERRE, W. C. FERRER INC. R. STRIVERRI, MAIS. Sci. and Eng., A293 (2000) 198.

B. Aguidevich, and M. Evins, "producing Grain Size Revolution of UUIMET Alboy", 15 dating the Cogging Recest,", 54 possibly 2009, 39, TAIS Warrending, P.A.

R. W. Exatts "Microstructural Modeling of Near Net R. W. Errats. "Microstructural Modeling of Near Net
 Shape Forgangs", Proc. Conf. EUROMAT 197,
 Dentische Confedent in Meditikande.

Chincin a Tecnologia dos Miderials, Vol. 20, n. 152, 2008

24

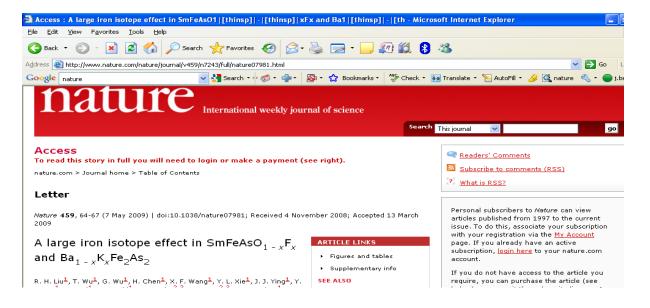
In **2010**...

1.5 million peer-reviewed papers 23,750 journals



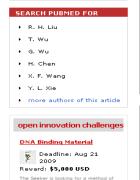
It is estimated around 40% of papers get citations





McMillan limit of 39 K (the theoretical maximum predicted by Bardeen-Cooper-Schrieffer theory) has generated great excitement 1, 2, 3, 4, 5. Theoretical calculations indicate that the electron-phonon interaction is not strong enough to give rise to such high transition temperatures⁶, but strong ferromagnetic/antiferromagnetic fluctuations have been proposed to be responsible 7, 8, 9. Superconductivity and magnetism in pnictide superconductors, however, show a strong sensitivity to the crystal lattice, suggesting the possibility of unconventional electron-phonon coupling. Here we report the effect of oxygen and iron isotope substitution on $T_{\mathbb{C}}$ and the spin-density wave (SDW) transition temperature ($T_{\rm SDW}$) in the SmFeAsO $_{1-x}$ F $_x$ and $\mathrm{Ba}_{1-x}\mathrm{K}_x\mathrm{Fe}_2\mathrm{As}_2$ systems. The oxygen isotope effect on $T_{\mathbb{C}}$ and $T_{\rm SDW}$ is very small, while the iron isotope exponent $\alpha_{\rm C}$ = $dlnT_{\rm C}/dlnM$ is about 0.35 (0.5 corresponds to the full isotope effect). Surprisingly, the iron isotope exchange shows the same effect on $T_{\rm SDW}$ as $T_{\rm C}$. This indicates that electron-phonon interaction plays some role in the superconducting mechanism, but a simple electron-phonon coupling mechanism seems unlikely because a strong magnon-phonon coupling is included.

To read this story in full you will need to login or make a payment (see right).



save your password What happens if I save my password Forgotten your password Login

I want to purchase this article

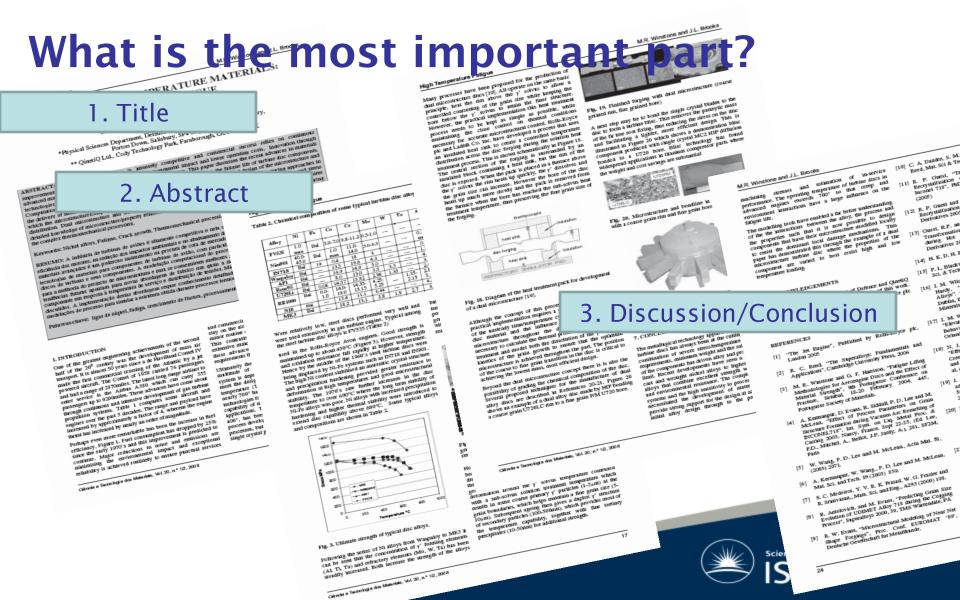
specifically binding DNA. As an Ideation Challenge, only a hig...

Price: US\$32

In order to purchase this article you must be a registered user.

Register now





Search: Titles are key



PLoS Collections: Article collections published by the P...

Research Articles Top

Spatial Epigenetic Control of Mono- and Bistable Gene Expression

János Z. Kelemen, Prasuna Ratna, Simone Scherrer, Attila Becskei

PLoS Biology:

Published 16 Mar 2010 | info:doi/10.137 1/journal.pbio.1000332

Related PLoS Articles

Location Matters: How Spatial Positioning of Regulatory Proteins Produces Divergent Outcomes

Widespread Gene Conversion in Centromere Cores

Jinghua Shi, Sarah E. Wolf, John M. Burke, Gernot G. Presting, Jeffrey Ross-Ibarra, R. Kelly Dawe

PLoS Biology:

Published 09 Mar 2010 | info:doi/10.1371/journal.pbio.1000327

Related PLoS Articles

Centromeres Convert but Don't Cross

Expression in Aneuploid Drosophila S2 Cells

Yu Zhang, John H. Malone, Sara K. Powell, Vipul Periwal, Eric Spana, David M. MacAlpine, Brian Oliver

PLoS Biology:

Published 23 Feb 2010 | info:doi/10.1371/journal.pbio.1000320

Related PLoS Articles

Genomic Responses to Abnormal Gene Dosage: The X Chromosome Improved on a Common Strategy

2-D Structure of the A Region of Xist RNA and Its Implication for PRC2 Association

Sylvain Maenner, Magali Blaud, Laetitia Fouillen, Anne Savoye, Virginie Marchand, Agnès Dubois, Sarah Sanglier-Cianférani, Alain Van Dorsselaer, Philippe Clerc, Philip Avner, Athanase Visvikis, Christiane Branlant

PLoS Biology:

Published 05 Jan 2010 | info:doi/10.1371/journal.pbio.1000276

Poised Transcription Factories Prime Silent uPA Gene Prior to Activation

Carmelo Ferrai, Sheila Q. Xie, Paolo Luraghi, Davide Munari, Francisco Ramirez, Miguel R. Branco, Ana Pombo, Massimo P. Crippa

Expanding your audience

- Seminars
- University newsletter
- Conference poster
- Blog post
- · Social media
- Press release
- Newspaper story or feature
- Funding body
- Politicians
- Beamtime proposals
- University Dean 30 seconds
- Members of the public
- Schools









Who is your audience?

- · Name, age, gender, marital status
- Occupation
- · Favourite music
- What level of education do they have?
- How well do they know your market/sector?
- How much time and attention do they have?
- What do you want them to do?
- What do they want?



Exercise: What are you thinking?

"Ordinary light bulb with standard base"

Is your light bulb:

- 110V or 220V?
- Tungsten? Fluorescent?
- Coloured? Frosted?
- Bright? Dim?
- Working? Not working?
- Smashed?
- Bayonet or screw-in?



Exercise: What are you thinking?

Don't take anything for granted

Anticipate the questions people may have

What is your audience thinking?



Where are you? Where is your audience?













Expanding your audience

To get your science more widely known, **self-promotion** is key.

- Professional and trade magazines
- General interest magazines
- University websites
- Blogs
- Newspapers
- General interest magazines
- Radio
- Podcasts

... are always looking for interesting stories



Structure of a science paper

Title **Authors/Institutes Abstract** Introduction Results **Discussion** Conclusion

Increasing information relevance



Structure of a news story

Title **Standfirst Byline Facts Facts Facts** Other stuff **Background** to story

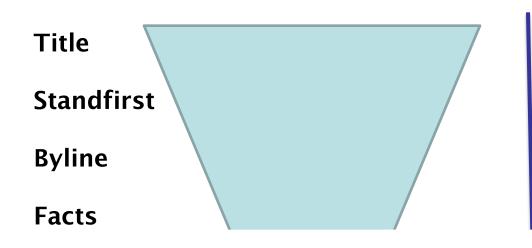
Most important

Decreasing information relevance

Least important



Structure of a news story



Most important information

Decreasing relevance

Even if the story is cut to save space, you still get all the information!



Exercise: Inverted pyramid

- 1. Mr Harvey did not say which drug was suspected of causing his death. An autopsy is scheduled to take place on Thursday.
- 2. Ramone, whose real name was Douglas Glenn Colvin, was found dead on his couch by his wife when she returned home on Wednesday evening.
- 3. Punk pioneer Dee Dee Ramone, a founder member of the Ramones, has been found dead at his home in Hollywood aged 50.

- 4. "We are handling it as a possible accidental overdose," coroner's office operations chief Craig Harvey said.
- 5. The Los Angeles coroner's office said drug paraphernalia, including a single syringe had been found in his home.



Exercise: Inverted pyramid

Punk pioneer Dee Dee Ramone, a founder member of the Ramones, has been found dead at his home in Hollywood aged 50.

Ramone, whose real name was Douglas Glenn Colvin, was found dead on his couch by his wife when she returned home on Wednesday evening.

The Los Angeles coroner's office said drug paraphernalia, including a single syringe had been found in his home.

"We are handling it as a possible accidental overdose," coroner's office operations chief Craig Harvey said.

Mr Harvey did not say which drug was suspected of causing his death. An autopsy is scheduled to take place on Thursday.

3 - 2 - 5 - 4 - 1





How the CS & PG CHAM SERVICESC CONCES



Scandal as workshy MPs get 58 days off in just five months

NUCLILAR fallest from It follows has Japan has been detected in the commercial and the co Jagons has been detected in making some properties of the transmission of the second section sec

proving problems done for Brownia Storie Co.

The described Lie-rossite, Common the Co.

The

leet the new liss Marple...



But angry fans say she is far too glamorous





El domingo 13 de septiembre prepárate para recibir una gran noticia

EL PAIS



registrar conectar

Viernes,4 de septiembre de 2009 - 07:24 h

▶ Edición Global cambiar

EL PAÍS.COM

Participa

publicidad

Inicio Internacional

Deportes Economía

Tecnología Cultura

Gente y TV

Sociedad

Opinión

Blogs

buscar

Vídeos | Fotos | Gráficos | Audios | Índice | Lo último | Lo más visto | A fondo | Archivo | Mi País

España

Servicios | Clasificados | Edición Impresa

Los estadounidenses con familiares en Cuba podrán visitarla siempre

DAVID ALANDETE | Washington - \$\Psi\$ 31 comentarios Estados Unidos permite que los ciudadanos con familiares en la isla les visiten tantas veces como quieran todos los años.-El Tesoro levanta las restricciones sobre el envío de remesas

Corea del Norte eleva el desafío al anunciar que enriquece uranio

El régimen de Pyongyang ya controla la tecnología para fabricar bombas con plutonio, como quedó



Ahmadineyad refuerza su poder El mandatario iraní logra el apovo del



Messi y Tévez, delanteros ante Brasil

"Saldremos a atacar", asegura el seleccionador argentino, cuyo equipo se lo juega todo en el clásico suramericano

- "Kaká: "Me quitaría el sueño estar como Argentina"
- Crisis de talento en Argentina, por JOSÉ PÉKERMAN



















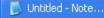












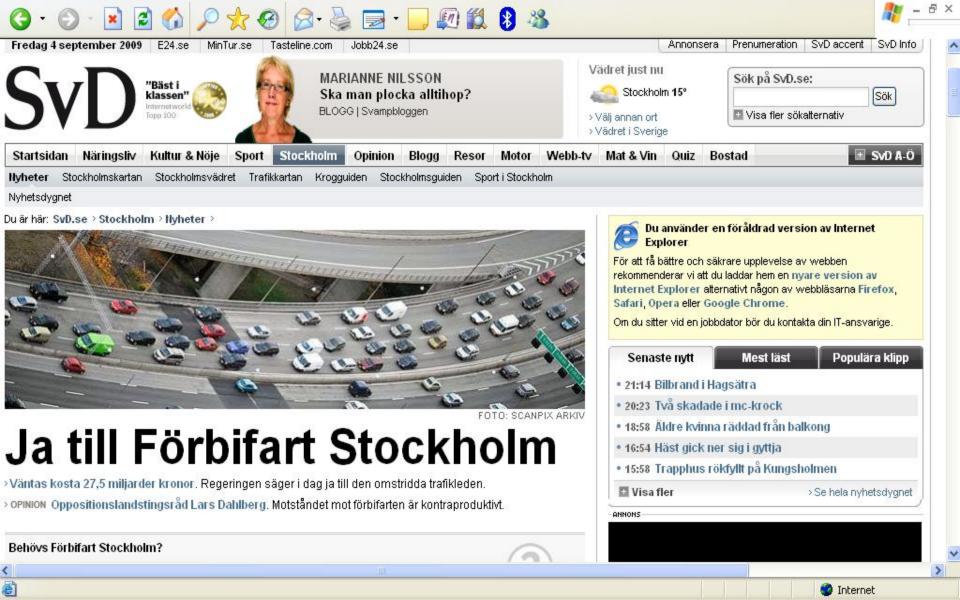














Share: E

in Share 5

Health News Stephen Adam

Health

Oily fish and nuts 'cut chance of food allergies'

Mothers-to-be can reduce the chances of their babies developing food allergies be eating a diet rich in oily fish and nuts, new research indicates.



Early exposure to omega-3 fatty acids - found in food like salmon and wallnuts - makes it less likely bables will develop food allergies, believe researchers - Photo: MIKKEL VANS



By Stephen Adams, Medical Correspondent 6:30AM BST 09 Sep 2011

10 Comments

Academics have discovered that omega-3 fatty acids - found in fish like salmon, mackerel and tuna, as well as walnuts, pumpkin seeds and linseeds - prompt the gut to develop in a way that boosts the immune system.

Headline: Only fish and nuts 'cut chance of food allergies'



Standfirst: Mothers-to-be can reduce the chances of their babies developing food allergies by eating a diet rich in oily fish and nuts



UK News w

Telegraph and Bupa Care Homes semina Register today





Unit of meaning

The combination of headline and standfirst is the most important part of story

They are written together to work as a self-contained unit of meaning

Your reader might choose to continue reading....



Search - enhanced by Google

Dating Offers

Motoring Health

Property Gardening Food and Drink Family Outdoors Relationships Expat

FREE Seminar for Telegraph Readers

TELEGRAPH MEDICAL INSURANCE »

telegraphmedicalinsuranceservice

Health News | Health Advice | Diet and Fitness | Wellbeing | Expat Health | Flu | Swine Flu

Health

Oily fish and nuts 'cut chance of food allergies'

Mothers-to-be can reduce the chances of their babies developing food allergies by eating a diet rich in oily fish and nuts, new research indicates.



Early exposure to omega-3 fatty acids - found in food like salmon and wallnuts - makes it less likely bables will develop food allergies, believe researchers Photo: MIKKEL VANG



By Stephen Adams, Medical Correspondent 6:30AM BST 09 Sep 2011



Academics have discovered that omega-3 fatty acids - found in fish like salmon, mackerel and tuna, as well as walnuts, pumpkin seeds and linseeds - prompt the gut to develop in a way that boosts the immune system.



Children's Health » Health News o Stephen Adams »



Telegraph and Bupa Care Homes semina Register today



Picture captions are also a single unit of meaning telling the whole story

Telegraph mone



Good headlines/titles are:

- findable using keywords and plain language
- effective as links
- supported by standfirsts that make good snippets
- descriptive, not clever (no jokes!)
- front-loaded for user interest
- · instantly understandable
- · readable in a **list**



Exercise: Headline and standfirst

Write a headline and standfirst for your research:

- Headline (10 words maximum)
- Standfirst (25 words maximum)



How people read...

- scan-read
- look for information cues
- focus on tasks
- impatient
- move forwards and keep moving
- · are **cautious**, then conservative
- create their own path



How people read...

"We act as though people are going to pore over each page...

...the reality is much closer to a billboard going by at 60 miles an hour..."

Steve Krug, Don't make Me think



On writing

"I didn't have time to write a short letter, so I wrote a long one instead."

- Mark Twain



George Orwell - 6 rules of writing

- Never use a metaphor, simile, or other figure of speech that you are used to seeing in print.
- Never use a long word where a short one will do.
- If it is possible to cut a word out, always cut it out.
- Never use the passive voice when you can use the active
- Never use a foreign phrase, a scientific word, or a jargon word if you can think of an everyday equivalent.
- Break any of these rules sooner than say anything outright barbarous!



Use fewer words

- Prior to
- At this point in time
- The reason for this is because
- Due to the fact that
- It is important to bear in mind that
- A pair of twins
- Orange in colour
- Surrounded on all sides
- Close proximity

- before
- now
- The reason is
- because
- Note that
- Twins
- Orange
- Surrounded
- Near



Use short words

Latin	Anglo Saxon
Residence	House
Cogitate	Think
Assists	Helps
Sufficient	Enough
Prior to	Before
Relate	Tell
Perplexed	Worried
Converse	Talk
Perambulate	Walk
Exterminate	Kill

Notice Latin
words are
longer and more
abstract than
their AngloSaxon
alternatives?



Cut copy in half

- Be concise and precise
- Don't hack at the expense of sense
- Lose the flowery stuff
- Murder your darlings
- Keep sentences brief and clear
- · Single idea per paragraph
- · Write in the active voice, not the passive voice
- Punctuate lightly



Lose the flowery stuff

"Recently xxxx has generated much attention due to its...."

"xxx has be shown to have amazing and mind-boggling deviations from currently accepted theory of..."



Murder your darlings

Whenever you feel an impulse to perpetrate a piece of exceptionally fine writing, obey it – whole-heartedly – and then delete it before sending your manuscripts to press. Murder your darlings.

- Sir Arthur Quiller-Couch

Parts of your writing that you are particularly proud of are probably self-indulgent and will stand out. Ask someone to **read your writing objectively and edit it** or give feedback. Your writing will be much, much, much better following critical review.

If I come across anything in my work that smacks of 'good writing,' I immediately strike it out.

- Elmore Leonard



Passive voice

Passive voice

A priceless Rembrandt painting was stolen from the Metropolitan Museum of Art by three men posing as janitors.

(The painting is more important than the men in this sentence)

Active voice

Three men stole a priceless Rembrandt painting from the Metropolitan Museum of Art.

If you don't know what caused something, you **have to use** the passive voice:

The cargo was damaged during the trans-Atlantic flight.



Passive voice

"In the beginning the Universe was created. This has made a lot of people very angry and has been widely regarded as a bad move."

- Douglas Adams



Exercise: Cutting copy

Room Bookings

The CCPR has long provided a cost effective service for members by the provision of meeting facilities at its offices. We have recently extended and upgraded the facilities. We have two refurbished rooms available. The air conditioned Howell and Colson Rooms boast prices which are difficult to better in Central London.

These rooms are available to CCPR members and non members and can be utilised all week, including evenings and weekends. We are located in the heart of the City of , close to and St James's Park tube. For more information, call 020 7123 4567.



Exercise: Cutting copy

Hire a room in central London
We have two air-conditioned rooms available for hire in
Westminster, near Victoria and St James's Park tubes.

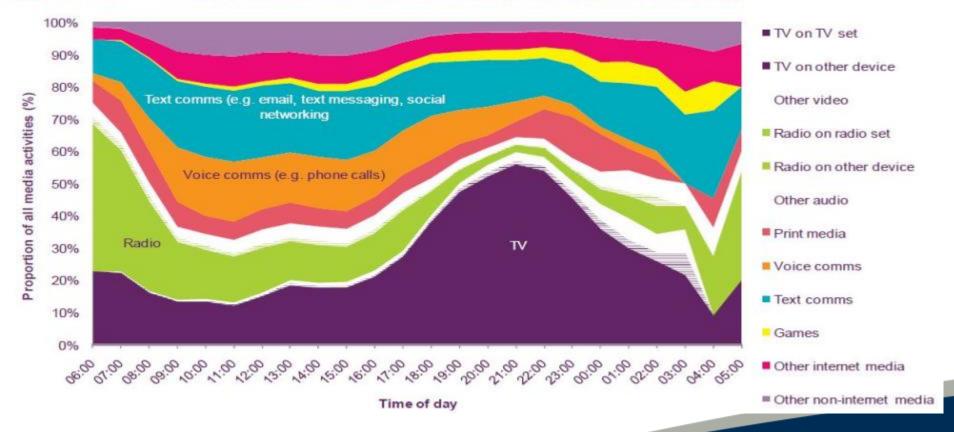
Rooms are available to all, **daytime**, **evenings** and **weekends**. Recently upgraded, they offer great **value for money** in a prime location.

For more information, call 020 7123 4567.



UK media consumption habits Ofcom 7th annual communications market report August 2010

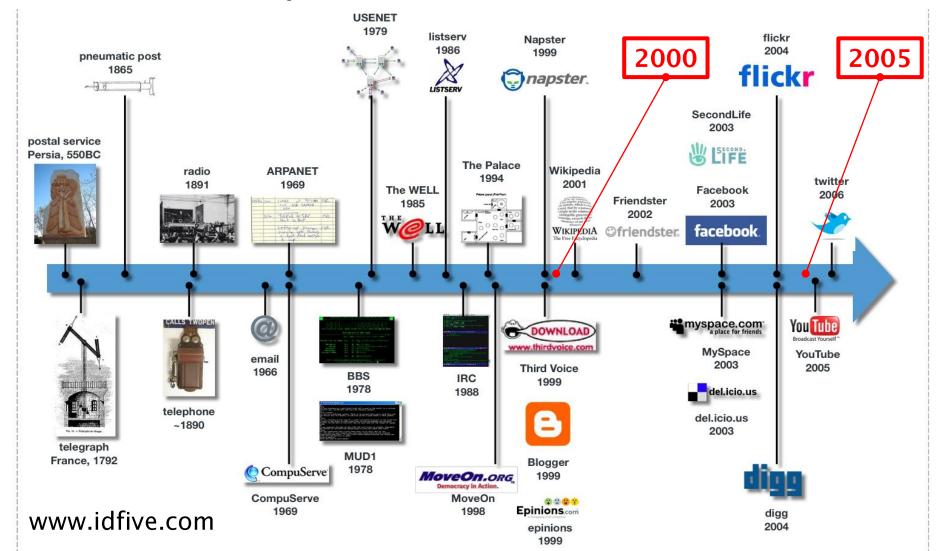
Figure 1.14 Proportion of all media activity throughout the day



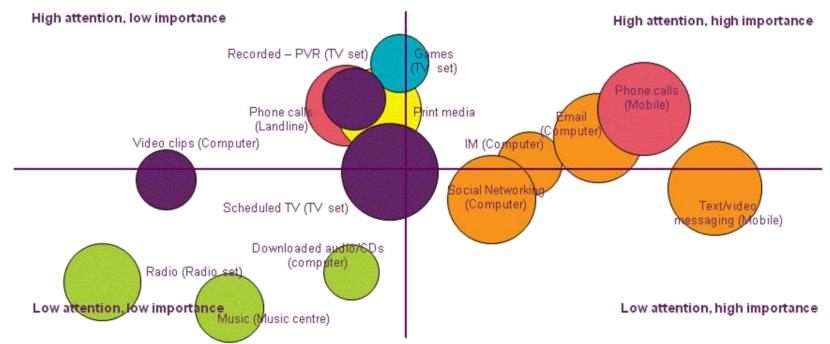
http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cmr10/



A (somewhat incomplete) timeline of social media



Attention Paid (average score)



Perceived importance (average score)



clearly communicate your research to people beyond your specialist area



blends science into the mix of everyday culture

shares knowledge beyond the paywalls of journals and newspapers



rapid alerting for your networks - saving them time

make use of the things that fall in the cracks between publications



shows you to be active and vibrant

share context and interpretation



explain the process and business of doing science

a powerful way to reinforce real world activity continuing the engagement after events





Making sense of it all: what to use



















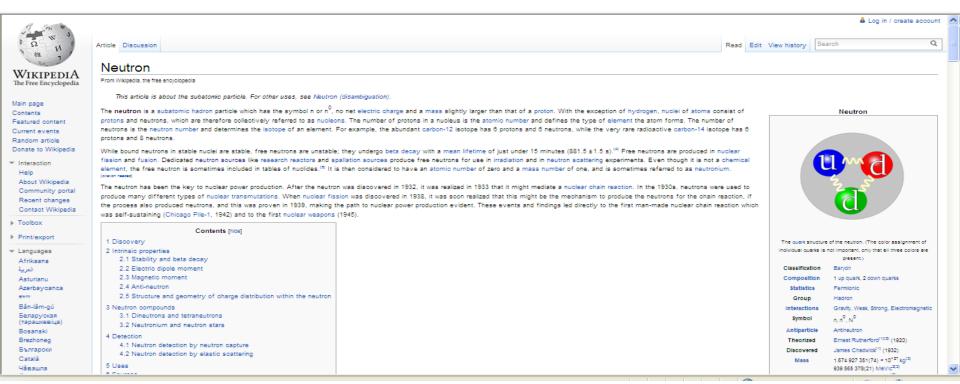






+ mobile apps to update on the move



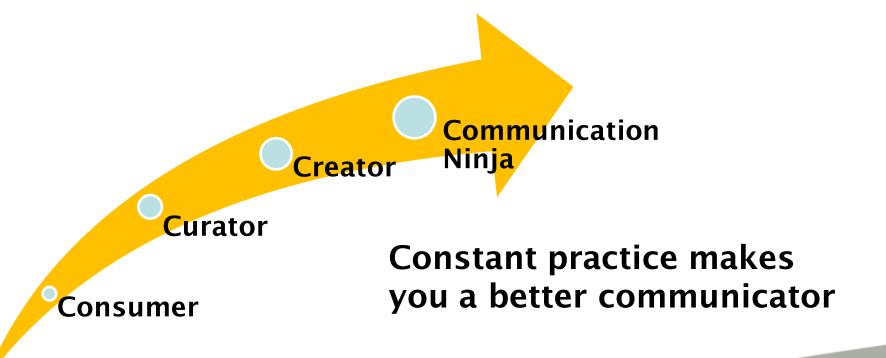




Everyone uses Wikipedia, so it is our responsibility to contribute and keep it upto-date and accurate



Social networking confidence





What is your killer content?

Ask yourself:

- What's the one thing I want people to take away from this?
- Can they get it easily?



Key questions for a news story

Who? What? When? Where? Why? How?



Exercise: Newsroom

Time for exercise: 45 minutes

In teams of 5

Each group will make 5 articles about their research

- Write each article on a separate sheet of A4 paper
 - Headline
 - Byline (writer's names)
 - Standfirst
 - **150 words** describing key points of the research for an interested audience, written in inverted pyramid style

